The Builder

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Prospect for 1961

DESPITE THE LAST TWELVE MONTHS which, industrially, closed on a dull note, the prospect for building in 1961 is good. This view is taken by the Ministers of Works and Housing and by the Presidents of the RIBA and the National Federation, as well as by other leaders of the industry as expressed in the Messages which follow. An industrially busy year does not, of course, necessarily spell an easy year for builders, for rising materials prices are to be matched in October by a sharp jump in wages and a reduction in working hours. All the industry's tenacity will be needed if firm-price tendering is to be held, as it should.

Setting aside the vital question of overseas contracting, to which MR. ERROLL makes reference in his message, what are the keys to a successful year for building? They would seem to be three in number: first, a much more general and efficient use by architects of the Code of Tendering Procedure which should give builders a fair chance to put in economic as well as keen prices; second, a wider interest by builders large and small in management of men, materials and contracts; third, a real effort by employers and operatives alike to secure to building a proper share of suitable school-leavers. Progress in 1961 and in following years may well depend on the industry's own efforts in these three directions; that all are within its own control is both the industry's luck and its responsibility. We wish it well in its work.

Messages from Ministers of the Crown and Leaders of Industry

From Lord John Hope, MP, Minister of Works

ALL THE SIGNS are that 1961 will be another year of great achievements by the building industry with the volume of work rising to a higher level than ever before. But an increased load of work will also put an increased strain on the building industry and its resources, and this could lead to difficulties through shortages of craftsmen and materials, increased costs, and a reluctance to tender at firm prices. However, the advice given to me is optimistic and I have confidence that the industry will meet the challenge by the full use of its resources of skill and management.

I am glad to note from the figures of apprentices that the industry is taking a share of the new body of school leavers. As mechanisation reduces drudgery and training schemes for managers increase in number, the building industry opens opportunities to the best type of boy. More training facilities are becoming available in the schools and it is very important that full advantage be taken of them.

John Hope

From The Rt. Hon. Henry Brooke, MP, Minister of Housing and Local Government and Minister for Welsh Affairs

THE PAST YEAR saw private house-building once again break all post-war records, and something like 300,000 new dwellings from both private and public sources were added to the national stock. The drive to improve our older houses has gathered strength too.

We enter 1961 with almost a quarter of a million houses and flats under construction in England and Wales. There are great needs still to be met,

and much work for house-builders to do. If there is a threat to the future well-being of the industry, it lies in the danger of a full order-book breeding carelessness about quality and costs.

In my message to you last year I drew attention to the need for a higher standard in the layout of estates and the choice of types of building. There are signs of a quickening interest in this aspect of design, and I hope that my recent revival of the housing medals competition in a new form will provide a powerful stimulus.

My best wishes to your readers and to all in the industry for a happy and successful year.

Henry Brooke

From the Rt. Hon. Frederick Erroll, MP, Minister of State, Board of Trade

AS CHAIRMAN of the Advisory Council on Overseas Construction I have been pleased to see the steady growth in the amount of overseas work being undertaken by the building and civil engineering industries, and I am glad that the visits which I made during 1960 to Central and South America and to the Middle East enabled me to see at first hand something of their achievements.

For many years past the industry has been associated with a great variety of overseas projects. Work on hand or recently completed includes nuclear power stations for Italy and Japan, the great steelworks at Durgapur in India, harbour schemes in the West Indies and in Africa, pipelines in the Middle East and multi-storey office blocks in Australia.

The constructional industries and the associated professions, including architects and consulting engineers, are making a substantial contribution to the export drive not only from their direct earnings of foreign currency but also from the valuable opportunities which they create for a wide variety of engineering and other exports. Overseas work done has increased by almost 80 per cent since 1955 and for the year ending March 31, 1960, its total value reached almost £124 million.

I am glad to have this opportunity of wishing 'The Builder' and its readers success in 1961. I am sure that their efforts will lead to an even better export record in 1961.

F. J. Erroll.

From Sir Charles Wheeler, KCVO, PRA

MAY I HOPE that with the increasing emphasis now placed on engineering and financial returns, readers of 'The Builder' will step-up their traditional insistence on the employment of sculpture and the decorative arts? In 1961 buildings devoid of them will still be arid, but the Graces of the Arts will remain as ever, exciting to woo and worthy to be won. And, of course, their marriage with buildings has always been honoured by civilised man.

From Sir William Holford, President RIBA

THE FORWARD estimates of building work which are made by the RIBA, the RICS and the NFBTE point clearly to the fact that 1961 will be just as busy as last year. And this is reassuring not only to the building industry but to those who are waiting with more or less patience at the receiving end of the line, for schools and hospitals and university buildings, slum clearance and old people's housing.

Also on the credit side, as the result of the initiative originally taken by architects in setting up the Consortium of Local Authorities' Special Programme, has been the world-wide recognition of the type of school building exhibited at the Milan *Triennale* and awarded not only a gold medal but a Special Prize. The work of this and other 'development teams' is clearly proving of great importance for the future of building.

On the debit side is the deterioration of our towns, which is rapidly approaching a critical stage. Traffic is probably the main instrument of havoc; but behind this is a lack of forethought and organisation which is resulting in a lowering of standards in many types of urban building and—worst of all—in lack of co-ordination between them. Architects have been much criticised for going outside their proper territory and calling attention to what they consider deficiencies in the present system—the RIBA during 1960 made its views known to the public on a number of controversial subjects in this field.

Nevertheless, we have had considerable backing; and I hope we shall continue, with the help of the technical Press, to present a point of view for public discussion. Fifty years ago any mention of architecture was rare in the London dailies or in the provincial Press. Today you can hardly open a newspaper without finding a letter or an article on the subject. The interest seems to be there; the problem is to turn out new building that is worth discussing now and will be worth preserving in a hundred years' time.

I am delighted to offer my very best wishes for the New Year to your readers, and express my appreciation, as always, of the consistent service to building which 'The Builder' provides.

From Mr. Cyril Sweett, Chairman, Quantity Surveyors' Committee, RICS

DURING THE PAST YEAR building activity has not been seriously affected by any policies directed at controlling the expenditure of capital, and as a result encouraging and steady progress has been maintained by the industry. The importance of this so far as the national economy is concerned cannot be over-emphasised.

There is every indication that the industry can look forward with confidence in the coming year to a further steady increase in the demands for its services and, as a result of greater confidence in the future of the industry, some of the major building materials manufacturers have already allocated substantial capital sums to increase productivity in order to meet the increased demand. For the same reason there has been during the past year an encouraging increase in the recruitment of apprentices.

With greater prosperity we should be able to look forward to a greater degree of collaboration and trust between all parties to a building contract, and to the elimination of any suspicion or fear that any one party is seeking some advantage without regard to the interests of another.

The National Joint Committee of Architects, Builders and Quantity Surveyors continues to provide a useful forum for the discussion of problems affecting the industry, and I look forward to the forthcoming publication by that committee of a Code of Procedure for Contract Management.

A study of papers read on the subject of building techniques and building costs during the past year has revealed a serious shortage of basic information within the industry, and emphasises the need for great concentration on research, which is a subject to which architects, engineers, builders and quantity surveyors can individually and collectively make valuable contributions. Adequate funds are, however, needed in order that the results may be properly co-ordinated and made available to all those concerned.

In conclusion, may I wish 'The Builder' and its readers a very prosperous New Year.

From Mr. Geoffrey Swayne, OBE, President, IOB

IT IS INDEED A PRIVILEGE to be invited again to contribute a New Year message to your excellent newspaper which, incidentally, I have now been reading week by week for forty years.

For my Institute, the past year has been notable for the fulfilment of two oft-expressed aspirations—the adoption and promulgation of its revised Examination

Regulations and Syllabuses, and of its scheme for the establishment of Branches, the first of which was inaugurated at Birmingham in October.

For the future, my hopes are that there will be a steady and constant flow of building work, full recognition of the fact that efficiency and prosperity are dependant upon planned education and training, a much greater measure of mutual regard and confidence between architects and builders and between builders and operatives, a diminution of labour-only sub-contracting, an ever-growing acceptance of my Institute's qualifications as evidence of competence to practise building and, finally, good health, happiness and prosperity for all engaged in building and in publishing 'The Builder.'

From Mr. D. E. Woodbine Parish, FIOB, President NFBTE

AT THE OUTSET of 1961 the building industry seems to be more fortunate than some other industries in that its prospects are probably better than at any period since the war. This is borne out not only by the long-range forecasts made a few months back by the NFBTE but also by those made quite independently by the Royal Institute of British Architects and the Royal Institution of Chartered Surveyors. Behind us we have left a year of high activity, restricted only by the limited availability of some materials and the appalling building weather experienced during much of 1960. Ahead, we may anticipate a continuing period of fairly full order books, the reasonable likelihood of a drier summer in which the industry can exploit its productive capacity and a more plentiful supply of those materials which have been causing the industry some anxiety during the past year. A full order book, however, does not provide the master key to industrial and economic success within a firm, be it large, medium or small. It must be matched by a highly efficient and fully effective building organisation, capable of carrying out the work in hand with a high degree of competence; by long-term comprehensive training schemes designed to ensure an ample flow of qualified and experienced personnel for all levels of the undertaking; and by far-sighted managements capable of assessing the technological changes and adapting themselves and their organisations to embrace new and better methods of marshalling, directing and controlling their resources.

As we enter 1961, therefore, I invite my building contractor colleagues to ask themselves two questions: Is my organisation as efficient as it can possibly be and am I seeking and obtaining the best advice and information on which to formulate and prosecute future policy? Second, am I recruiting and training, or helping to train, the right number of craftsmen, supervisors and junior executives to meet the industry's future needs? So far as the former question is concerned it may appear unnecessary to mention the growing help that the Building Advisory Service is giving to building firms, both in regard to the conduct of office work and the control of site operations. Scarcely a working day passes without the NFBTE issuing guidance and information upon a wide range of matters of immediate concern to those responsible for directing building firms.

With regard to the latter question, we must clearly recognise the significance of 1961 and 1962 being 'bulge' years. If the building industry during the next two years fails to ensure that the maximum number of suitable boys are recruited and given every opportunity to acquire technical skills and knowledge to fit them for careers in building, we shall be missing the greatest opportunity that the industry has had for well over a quarter of a century. We simply must not fall down on our individual and collective responsibilities in this matter. My primary concern (and I am sure that it is one in which the Editor of 'The Builder' is in complete sympathy) is to see that the prospects for 1961 do not dazzle us and lead us to think that the future can take care of itself. We have done well in the past, but I am convinced that we can do even better in the future.

May I conclude by taking this opportunity of expressing thanks to the Editor and his Staff for the generous help which they continue to give to the building industry and wishing them and all readers a happy and prosperous New Year.

From Mr. J. H. Mills, President NFBTO

AS WITH EVERY OTHER POST-WAR YEAR the prospect for 1961 in the construction industry looks bright. May the augury be fully justified! The economy of the country as a whole does, however, give rise to some misgivings due to the substantial number of persons now on short-time work. The economic barometer is said to be a delicate instrument—what affects one part of the economy may very well spread to other parts. There are those who express the same sentiment in a different way by referring to the checks and balances by which the economy as a whole is sustained. But however the truism is expressed, it remains true that a slump in only one major industry (such as motor-car manufacturing or shipbuilding) has its impact throughout the country. We have no slump yet in the accepted sense of that terms; it is a dent rather than a depression, but even dents should be tackled as soon as they appear.

The industry has just made a settlement on the hours question, about which the operatives lodged their claim some time ago and in view of that settlement, for the first time for many years the Joint Council had no need to listen to argument and debate or to receive evidence in support of the application.

I naturally would have liked to have seen the implementing of the shorter hours and increased rates before next October, but we do not live in a world where we all get what we want—an impossible situation in any event where wants are opposed and contradictory. As in all spheres of life where argument and debate form the corollary of differing interests, trade unions are reared in the art of the possible and are prepared to compromise, for compromise is at the root of most industrial settlements.

The construction industry over the past year has been very busy, and operatives have made substantial advance in keeping with the industrial climate. One would like to be able to prophesy a time when all industrial affairs, including wage rates, shall be decided upon regularly at NJC meetings by joint agreement instead of by way of claim and the presentation of evidence. In other words, a regularly annual rise in the wake of the continued prosperity of the industry.

Meanwhile, discarding a pipe dream, I have pleasure in extending to the Editor and Staff of 'The Builder' best wishes for the New Year, and express the hope that the construction industry will continue its busy career and so provide the building trade journals with plenty of material.

From Mr. C. E. Rogers, President FASS

IT IS A TRADITION to spare a moment to consider where we stand at the opening of a new year; and it is commonsense optimism to acknowledge first of all any advantage to which we can point. I begin, therefore, by saying that there is to my mind no doubt that at the beginning of 1961, all sections of the industry are in better heart and better trim than they were a year ago.

Nevertheless, I think we must not be over-confident. The general economic position of the country gives some ominous signs of a renewal of inflationary tendencies. Most of the building and allied industries will certainly have to adjust themselves within the next twelve months to increased labour costs and to a reduction in the working week. Some of the specialist trades have already had to take note of increasing freight charges and an increase in the cost of some materials derived from overseas.

This must mean that we shall have considerable difficulty in continuing to quote fixed prices; and, in my opinion, it will be impossible to do so unless there is more co-operation on the planning side by building owners — particularly local authorities — and their professional advisers. Just over a year ago I said publicly that I thought the time must soon come when firms would not be able to go on quoting fixed prices unless some assurance that could really be relied upon, were given as to the date by which a tenderer would be called on to carry out the work for which he is responsible; the last twelve months have not brought any improvement in the position and I believe that, unless the matter is now taken seriously in hand, we shall find ourselves forced within a measurable time to reintroduce a 'Rise and Fall Clause' into every contract.

I cannot believe that such a comparatively simple reform is impossible of achievement; and, though I do not think 1961 will be an easy year, I believe that the building industry—and particularly the members of my Federation—can and will come through it with all the success and prosperity which I wish for them.

Wit and Wisdom of 1960

Illustrations are of RIBA Bronze Medal Awards Announced in 1960

PERUSAL of the pages of 'The Builder' over the past 12 months shows how well the public inquiry into the development of the Monico site, in Piccadilly, which began at the end of 1959 and extended into the New Year, set what turned out to be the principal themes of architecture and planning for 1960—the problems of urban renewal and of how to fit modern road traffic into our towns and cities. For those with the patience to study it, the mass of verbiage at the inquiry contained much wisdom and good sense. MR. HUBERT BENNETT, FRIBA, Architect to the London County Council, declared:

'In architectural terms it is always easier to design anything if you take the lid off. Architectural planners know that if height restrictions were taken off building in London they could achieve not only better architectural results, but easier planning results on large sites.' Giving evidence on behalf of the Civic Trust, MR. ELWYN JONES, QC, MP, said: 'The pedigree of the proposed building for the Monico site appears to be by plot ratio out of permitted usage.'

In view of the explosive nature of the Monico inquiry, was it coincidence that, in a letter to the Editor, MR. R. W. HUNT averred: 'The scientific use of explosives would speed up the process of demolition'?

At the time of going to Press an acceptable rebuilding scheme for the Monico site is still awaited, but perhaps ALD. J. H. LEWIS, speaking at the annual dinner of the Birmingham and Five Counties Architectural Association, in his capacity as Lord Mayor of that city, had the germ of an idea that might suit the capital as well as the provinces when he said: 'I ask that designers of new buildings should be allowed a few frills.'

BRONZE MEDAL AWARD, SESA AREA: *research building, Northfleet, Kent, for Bowater Paper Corporation. Farmer & Dark, architects; Holland & Hannen and Cubitts (Great Britain) Ltd., builders*

The Industry Under Fire

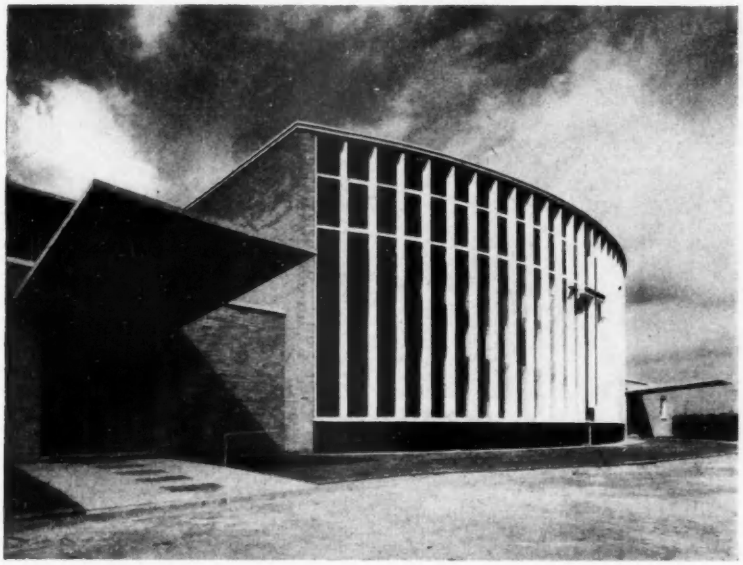
During the year, the building industry continued to be the recipient of some sharp criticism, both from within and outside. Speaking at the annual dinner of the Institute of Builders, held at Guildhall in February, SIR DAVID ECCLES, Minister of Education, told the assembled company: 'I think you must conclude that there is a danger that your industry is bound itself to be a brake on the whole economy unless management and training are rapidly and confidently improved.'

There were a number of occasions in 1960 when HRH THE DUKE OF EDINBURGH enhanced his reputation as a crisp and forthright speaker. Opening the 'Creative Craftsman' exhibition at the RIBA in February he declared: 'While we should acknowledge the invaluable and devoted work of the few people who fostered the revival of the creative crafts in the early years, it would be foolish not to admit that it was based on nostalgia and regret and an almost sacred worship of almost anything made by hand.' Another remark made by His Royal Highness on this occasion will also bear repetition: 'The craftsman produces individual things for individuals to own, and to possess something unique helps to make the owner unique.'

The motor vehicle was to be the subject of numerous discourses by architects, planners and others during the year. MR. CHRISTOPHER BRUNNER, vice-chairman, British Road Federation, in a paper on 'Cities—Living with the Motor Vehicle' told an open meeting at Friends House, London, on February 18: 'It is for the city itself to make up its mind whether it wishes to hasten its own disintegration and lapse into a relic of the past with no present economic function to perform, or to adapt itself to the times.'

BRONZE MEDAL AWARD, WEST YORKSHIRE SOCIETY OF ARCHITECTS: *the Rhodesway Secondary School, near Bradford, for Bradford Education Committee. Scherrer & Hicks, architects, in conjunction with W. C. Brown, Bradford City Architect; F. Shepherd & Son, Ltd., builders*

Some of the ways in which the building industry might set about improving its efficiency were indicated by MR. PETER TRENCH, in a paper 'Looking Ahead at the Building Industry,' given to the RIBA



BRONZE MEDAL AWARD, MANCHESTER SOCIETY OF ARCHITECTS: *Blackley Crematorium, for Manchester Corporation. L. C. Howitt, city architect; G. & J. Seddon, Ltd., builders*

in March. Mr. Trench said: 'Few industries have achieved their end product in conditions so conducive to waste as building; some of these conditions are of its own making, but others are the result of working in the open with a constantly changing labour force. The antidotes are already emerging — better training, increased managerial skill, mechanisation and prefabrication or off-site operations —they are being forced on us by the external influence of economics and the trend will continue.'

A few days later SIR HUGH CASSON, FRIBA, added his contribution in the course of a discussion on a paper on 'Aesthetic Standards for House Builders' submitted to the House-Builders Conference in London. He said: 'There is every indication that we are a stick-in-the-mud industry—cannot we do something about it? We are inefficient and our quality is not good enough.'

PROFESSOR MISHA BLACK'S successful scheme for the rehabilitation of Magdalen-street, Norwich, had a number of imitators in 1960. Speaking on this scheme at a meeting of the Institution of Municipal Engineers he said: 'To persuade everyone to work together to a common design, and to create an effective organisation for that purpose, is the hardest part of the job.'

Education continued to occupy an important place in the news. In a letter to the Editor on May 13 MR. D. A. G. REID declared: 'No substantial progress is likely to be made towards the joint training of architects, builders, quantity surveyors and structural engineers until essential differences in training policy are resolved.'

'Poet's Corner' was a weekly feature that established a firm place for itself in 1960. Ever topical, on May 20 ANON summed up London's traffic problem thus:

Improve the London roads or let them be?
Here's a dilemma for the LCC,
Remorselessly decreed by fates perverse—
What er'e they do congestion must get worse!

Thus do the planners ever stand in awe
Of unrelenting Parkinsonian law—
Aloof to all restrictions, rules and codes,
'Traffic expands to fill the larger roads'!

British Architects' Conference

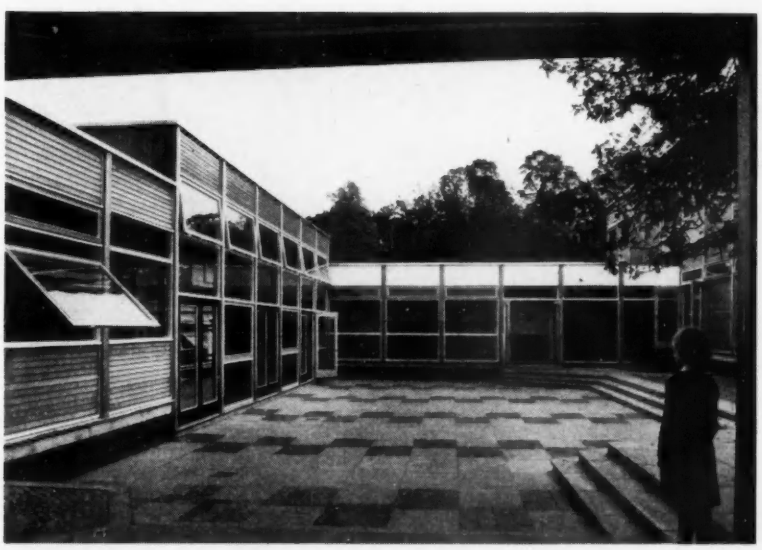
The British Architects Conference, held at Manchester in June, once again provided a pointer to the main currents of architectural thought. SIR BASIL SPENCE, opening the conference in his capacity as PRIBA, said: 'Like the profiteers who corner the bread supply in a besieged city, the speculators are cornering the limited supply of building land in town and country and holding the community to ransom. The money that should be going into better architecture and higher standards is being taken by people who have contributed nothing to the building process.'

SIR KEITH JOSEPH (Parliamentary Secretary, MoHLG) told the Conference: 'Architects must study their own lives, for they have sometimes been like spectators at a football match who complain from the sidelines but play no active part in the game.'

MR. L. HUGH WILSON, FRIBA, said: 'The Government should develop one or two new towns as laboratories for research into methods of design and building, and forms of living for the future.' MR. ARTHUR LING, FRIBA, had something to say to the Conference on the traffic problem. He declared: 'Only by spacing cities out at very low densities, which means abandoning the city as we know it today, and the country too, could the space required for roads and parking be provided. Priority should be given to public transport, which needs positive support and development, and unnecessary traffic eliminated by rationalising the location of shops, offices, factories and institutions that determine the main traffic flow.'

The theme of traffic and cities was to recur again in the HON. LIONEL BRETT'S Alfred Bossom lecture to the Royal Society of Arts. Speaking on 'The Crisis of Urban England,' he said: 'Towns change so continuously that it is

BRONZE MEDAL AWARD, WESSEX SOCIETY OF ARCHITECTS: *the Moat infant and junior schools, Matson, Gloucester, for Gloucester Education Committee. J. V. Wall, city architect; W. T. Nicholls, Ltd., builders*



possible not to realise that the changes that have occurred in the last hundred years have the scale of a disaster. We are all familiar with the two-way action of the motor car, centrifugal in its ability to drop houses down every remotest country lane, centripetal in its insatiable appetite for space at the centre—so that our towns and cities continue to explode into the countryside yet continue to seize up with central congestion. . . . Our cities and towns exist—a greater investment than all the rest of our national wealth put together. They cannot be written off, and they cannot be rebuilt to give every worker a car park.'

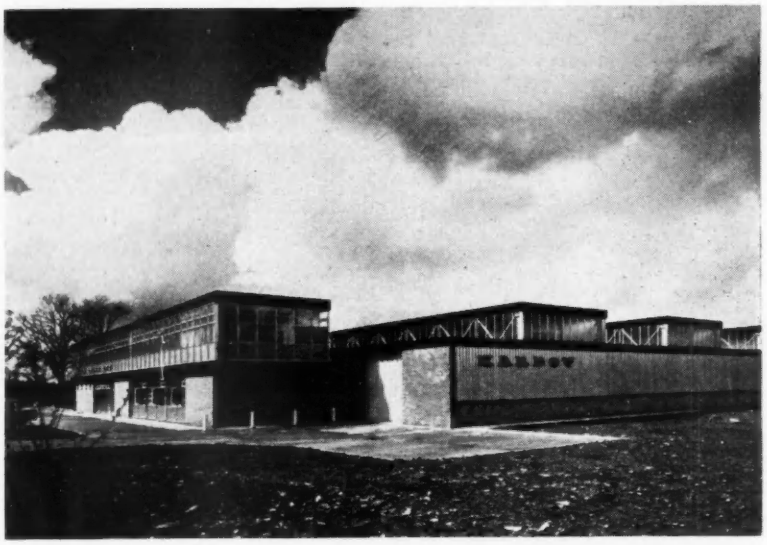
The Civic Trust's one-day conference on 'Rebuilding City Centres,' held in London in July, provided a valuable forum for architects and planners on a subject of great topical interest: MR. DUNCAN SANDYS, MP, president and founder of the Trust, summed up the problem thus: 'The central areas of so many of our towns, all over the country, have for one reason or another become ripe for rebuilding. One thing is certain. Rebuilding is going to take place, during the next decade or two, on a vast scale. The main issue can be defined in one simple question. Should an important central area be rebuilt plot by plot, as and when each individual owner so decides, or should it be redesigned and reconstructed as a whole?'

Architectural Research

In a special article in 'The Builder' of July 29, on 'Architectural Research,' PROFESSOR R. GORDON BROWN WROTE: 'While commercial and government sponsored research organisations do conduct valuable research [into architectural problems], it is in the nature of their task to work on research directed towards commercial and industrial ends. More academic research, concerned with the greater understanding of processes of the mind, or with the application of an intense and non-objective curiosity to aspects of architecture and its related fields, is unlikely to be undertaken anywhere if not at the universities.'

After some months' rest from scoring a century in his series 'Everyday Things,' MR. ARTHUR W. KENYON, CBE, began a new series, 'More Everyday Things,' in 'The Builder' of August 5. Writing on 'Trade Literature' he declared: 'I have been much impressed over the last year or so by the vastly improved quality of design in the trade literature which daily comes into our letter box. I would like to congratulate those who are setting this new high standard and hope they are finding that good design does, in fact, pay.'

Among the distinguished speakers at the Chartered Surveyors' Annual Conference, which was held on the theme of 'Education for the Surveyor's Profession,' at Bangor, SIR JOHN WOLFENDEN uttered a warning on the dangers that beset speakers on this subject. He said: 'There is no topic on which it is easier to become airborne than education; no subject lends itself more congenially to warm and shapeless generalisation; no area of human speculation admits of more ambiguities and misunderstandings; and nobody has anything new to say about it anyway.'



BRONZE MEDAL AWARD, SOUTH WALES INSTITUTE OF ARCHITECTS: *Depot and office, Fforestfach, Swansea, for Kardov. Smith, Wilson & Cox, architects; E. Turner & Son, Ltd., builders*

Another warning, this time on the practical subject of 'Housing: Planning for Future Needs,' was given by MR. J. M.

BRONZE MEDAL AWARD, NSW CHAPTER OF ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS: *Qantas House, Sydney, for Qantas Airlines. Rudder, Littlemore & Rudder, architects; Concrete Construction, Ltd., builders*

AUSTIN-SMITH, FRIBA, in an address to the Royal Society of Health, in October, who said: 'It is only necessary to consider in the broadest terms the changes that have happened in the last 60 years to realise that there is a great danger that a house built today will in 60 years' time be as old-fashioned as a house built in 1900 is today. This danger will be a certainty unless the problem of reviewing housing standards is tackled by analysing the needs and requirements of people in the light of existing trends.'

The traffic problem reared its ugly head once again in October. MR. C. D. BUCHANAN, ARIBA, in a paper on 'Transport: The Crux of City Planning,' given at the Town and Country Planning Association's National Conference, said: 'I find it significant that the real advances we have made in handling urban traffic since the war (I am thinking of the New Towns and Coventry) seem to have come about as a result of a comprehensive architectural approach, and the least has resulted when roads on the one hand and buildings on the other have been left to the separate professions.'

Presidential Addresses

With the autumn leaves came the first of the presidential addresses. MR. EDWARD PLAYNE, FRIBA, said in the course of his remarks to the Architectural Association: 'Is the Englishman right in regarding the town as a hideous place of work, only to be entered from 9 to 6? The answer at the moment is probably "yes," but surely it need not remain so? Surely it is impossible not to believe that during the next hundred years architects as a profession shall be allowed to show what we can do to rejuvenate our urban sprawl with worthy buildings, delicately placed in garden landscapes with magnificent trees. . . . Imagine what a change this would make! City dwellers would enjoy a pleasant life within the city boundaries, and the countryside would be left unspoilt.'

A few days later (on November 1) SIR WILLIAM HOLFORD, in his presidential address to the RIBA, said: 'If I may venture a prophesy, it is that this country will succeed in avoiding an urban landscape dominated by office buildings, as a contrast to the landscape of the Middle Ages, which was dominated by religious buildings. The growth of administration in every activity of life, and the fact that office rents bring the highest return (except perhaps for illuminated advertisements), is bound to mean an increase of tall, functional, cellular slabs and towers. What I imagine we shall *not* allow is their displacement of all other buildings of smaller bulk and greater individuality, such as clubs and music halls and theatres and small libraries and galleries, and all the various structures that enshrine social history and provide for social leisure. But this will require some hard thinking on administrative lines as much as architectural.'

In the same month PROFESSOR R. LLEWELYN DAVIES, in his inaugural address at University College, London, delivered an erudite discourse on 'The Education of the Architect.' He said: 'Can we, in the conditions of today, hope to re-establish the architect as an all-round man—the *uomo universale* of the Renaissance? We can, but only if we make a distinction between practice and theory. With this distinction in mind we can review the field of knowledge which has to be covered in an architect's education, noting that while he needs to understand the fundamental theory of a very wide range of subjects, he does not have to go far down the path of practical application in all of them.'

For the last month, and issue, of the old year it seems appropriate to give pride of place to our indefatigable contributor to 'Poet's Corner,' who summed up 1960 (with acknowledgements to Tennyson) thus:

Ring out, wild bells, to the wild sky,
From turret, steeple, spire and tower;
The year draws to its closing hour,
The year is dying—let it die.

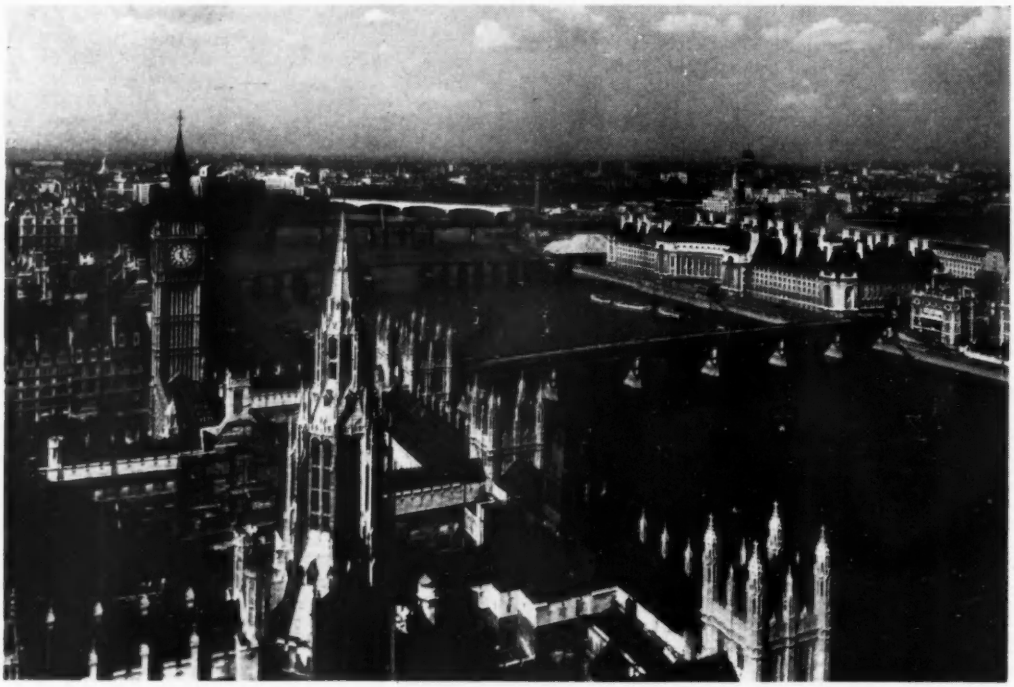
Ring out the ill-considered pile,
Ring out the inefficient plan
That aggravates the lot of man;
Ring in the truly modern style.

Ring out the conflict and the din,
Death on the roads and urban sprawl;
Ring in a better time for all,
And ring those better jingles in!

BRONZE MEDAL AWARD, NORTHANTS, BEDS & HUNTS ASSOCIATION OF ARCHITECTS: *House at Studhill, Beds, for Mr. A. V. Marques. Peter Dunham, Widdup & Harrison, architects; W. A. Nelsey & Sons, Ltd., builders (Photo: 'Ideal Home' magazine)*

BRONZE MEDAL AWARD, LONDON & MIDDLESEX: *LCC Housing estate, Roehampton-lane (high blocks) for London County Council. Hubert Bennett, FRIBA, Architect to the London County Council; Wates, Ltd., builders*

London and the City from the Palace of Westminster



COMPARISON BETWEEN THESE TWO PHOTOGRAPHS—both taken from the Victoria Tower, the Palace of Westminster, by special permission of the Lord Great Chamberlain—is interesting. The upper view, taken in August, 1946, shows central London and the City at the end of the war. The Bailey bridge spanning between the Embankment and County Hall is seen, as also the gap (left foreground) of the bombed Chamber of the House of Commons. The lower view, taken in November, 1960, shows the rebuilt Chamber, the Bailey Bridge cleared and the Shell building and the Festival Hall on the south bank. The tower of Bucklersbury House, beyond St. Paul's, is one only of the new additions to the City's skyline. These copyright photographs, as also the colour view on facing page, were specially taken for 'The Builder' by Sydney Newbery, FRPS, P-PIBP

a 'Builder' photograph by Sydney Newbery, FRPS

London and the City, from the Palace of Westminster, November 1960

The Builder, January 20, 1961, p. 95

Land of Frost and Fire

Holiday in Iceland

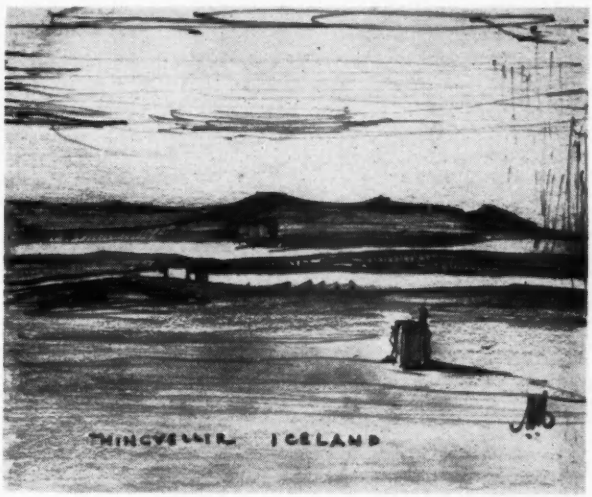
BY ARTHUR W. KENYON, CBE, FRIBA

THE FLIGHT over the North Atlantic to Iceland was sheer delight. A smooth, calm flight in a brilliant blue sky over packed clouds into a horizon glowing with shades of cream and pink, and at an hour which by my reckoning was nearly midnight. It was like sailing into an unknown paradise. Then down through the clouds to an open stretch of water with the snow-covered island in the distance, cerulean blue overhead and broad daylight everywhere. We were late, but perhaps the pilot had lingered so as not to break the spell. Iceland is known as the Land of Frost and Fire, and with good reason, for these are the elements which have shaped and characterised the island.

It is always exciting to enter a country for the first time, and our first impression of Reykjavik was of a quiet, peaceful, very clean and very tidy provincial town, unremarkable in its buildings although not in its people, whose grave courtesy and handsome bearing immediately suggested something of the quality and character which we learned to know a little better during our stay. This is a country which has known no war, but that is not to say no struggle. I felt that the power in this land lay with the elements rather than with the politicians.

Exploring Reykjavik proved a more fruitful occupation than I had expected. It was no good dreaming here of town plans that might have been, any more than at home. A great lake in the centre of the town, surrounded on all four sides by a wide roadway, was one of the pleasantest features. A colony of ducks had made it their home and a children's paradise.

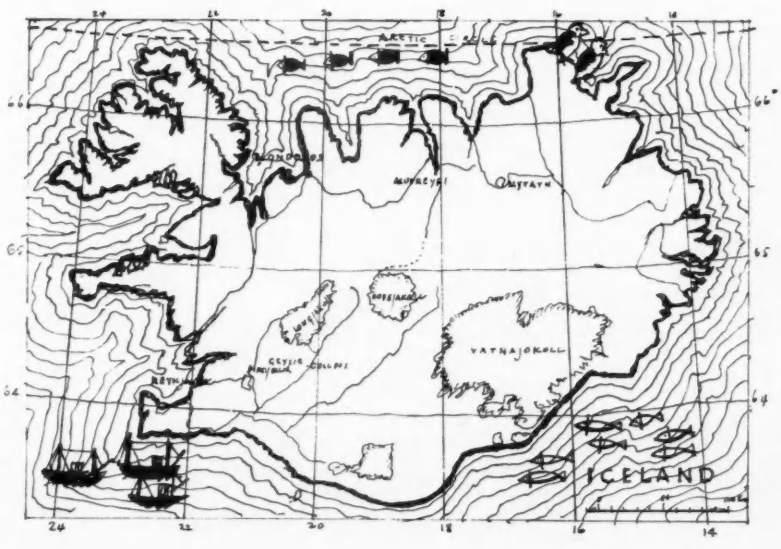
The buildings for the most part are quite undistinguished, but some of the older buildings of timber construction have been encased in corrugated iron sheeting painted in light colours which gives the effect of Scandinavian boarding. In most cases the roofs were similarly covered, and painted in red or green, and I found the total effect pleasing. There is no natural building material in the country and the new buildings are in reinforced concrete. There is a National Theatre, built



before the war, which forms a group with the National Library and Supreme Court; there is also a cathedral and a town hall, but all are of parochial proportions and character.

The hot water system in Reykjavik and in other towns in Iceland must be unique. The hot water springs which abound in the country are tapped and piped to the buildings, and we were taken to see the hot water tanks in which hot water from the natural springs is stored, and from there a huge pipe line takes it to buildings in the town. The source appears to be unlimited. This is district heating in a big way.

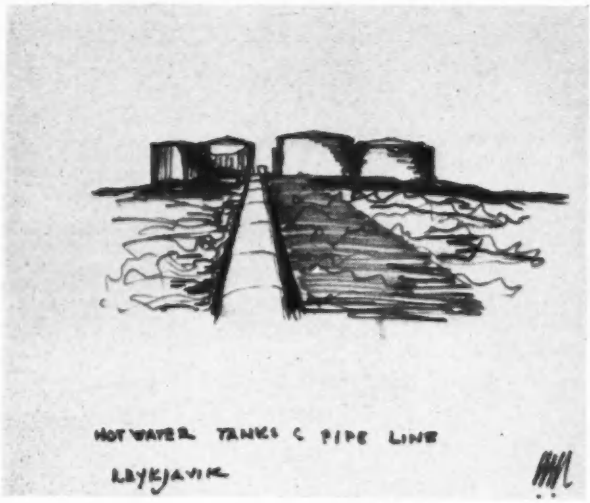
Farther north we were to see large greenhouses entirely heated from the hot water springs, where vast quantities of tomatoes, cucumbers and even bananas are being grown. The greenhouse industry is obviously making rapid strides and I admired the enterprise and endeavour which turned this natural resource of abounding hot water in a land of snow and ice to such excellent account. These streams of hot water sometimes spring up quite unexpectedly, and we were told of one which sprang up in a kitchen—a vast improvement on some immersion heaters I have known!



There are no railways in the island and it has been decided not to build any, as aircraft are being used instead, but they have already built 5,000 miles of roads, using the lava earth which covers the entire country. The unsurfaced roads are well engineered but they are very narrow and the bridges are only just wide enough to take the motor coaches. There is big work ahead on road maintenance and improvement.

There is a certain familiarity for

an Englishman about the weather in Iceland, if only on account of its unpredictability. Not so familiar is the brilliant sunshine at 10 p.m. and later. Even when the sun eventually goes down for an hour or two, daylight remains all through the night. I enjoyed the experience



of being able to sketch and take photographs at midnight. The climate is relatively mild and we found the temperature in midsummer very like an indifferent summer at home.

A coach excursion to the Lake of Thingvellir gave us our first glimpses of the countryside outside Reykjavik and we saw for the first time the vast tracts of lava fields which cover the island. Silent, uninhabited by man or beast, they seem to have been there since Genesis. Great rugged masses of piled lava towered into the horizon in awesome shapes with vast lakes stretching for miles between them and always a distant view of hills in changing colours of deep intensity. Snow covered peaks rose to the clouds with glaciers sweeping their sides. Geysers sprang from the plains, spouting jets of steam into the air and emitting vapours of sulphur, with boiling grey mud below the steam.

Land Without Trees

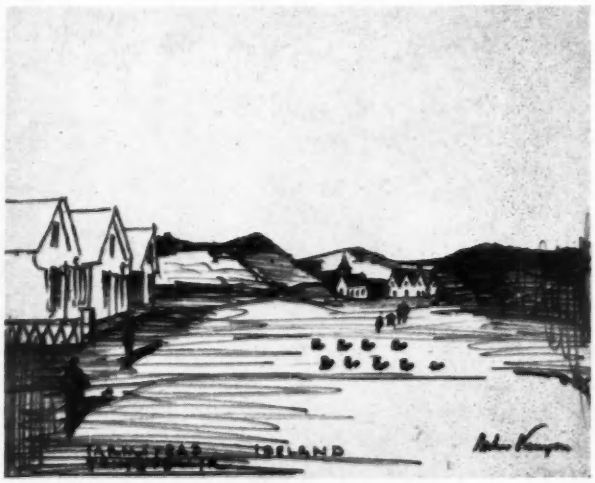
I had expected a country of the size of Iceland without a single tree to seem very strange, but stranger still was the fact that I never seemed to miss them. Efforts at reafforestation are now being made and there is a tax on cigarettes which goes entirely to finance tree planting. Perhaps in the course of time trees will take their place again in the natural setting, but Nature seems to have set her stage to perfection without them.

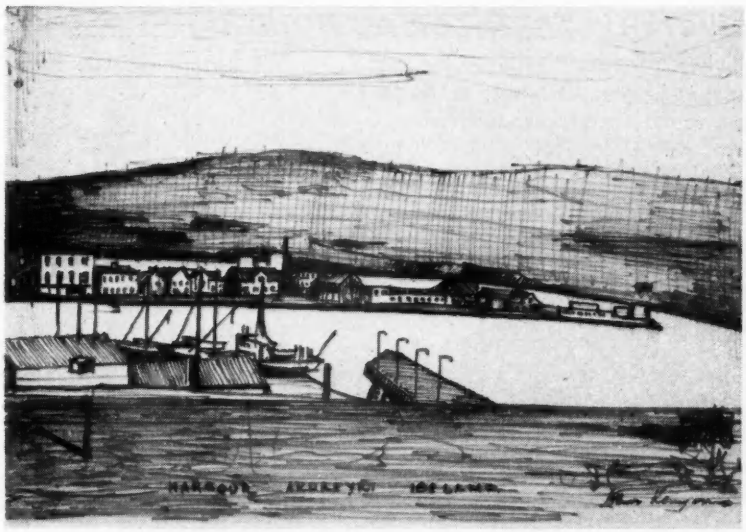
We found Gulfoss, the most famous of all the island's waterfalls and known as the Golden Waterfall, quite magnificent in its thundering beauty. From there we were able to see the great volcano of Mount Hekla smoking into the distant sky. This is the largest of the many volcanoes and was once believed to be the abode of Hell. It last erupted in 1947. We were told that many of the active volcanoes are perpetually covered with ice, and when they erupt and the glaciers burst it really is a land of fire and ice.

Our excursion to Thingvellir showed us the place where the first Parliament of the island, the Althing, used to assemble. This was a lava formation in open country with a distant view of the hills. No buildings were to be seen, and we were told that hollows were dug in the ground and the members of Parliament slept out in the open with a sheet over the hollow for covering. Parliament was held for about two weeks each year in the springtime to take advantage of the best weather, and this went on until the end of the 18th century.

A journey north by plane took us to Akureyri, the capital of the north country, a small town pleasantly situated at the bottom of Eyjaford, commanding fine views. From there we were able to take a drive in a small bus to Lake Myvatn which boasts two hotels, one a kind of youth hostel crowded with young people. This seemed to be a favourite Icelandic holiday retreat with a bird sanctuary, rowing on the lake and fishing as holiday pastimes. From the lava fields we moved into quite a different country of smooth, sandy hills, and then into a valley where hot sulphur springs rise out of the ground and from the hillsides. The small villages appear to be developing into little communities, well supplied with all the amenities of community life. Every centre has its dance hall and all have restaurants of a very good standard indeed considering their environment.

Iceland is essentially a forward-looking country, modern in its outlook. The Icelanders are a handsome people of fine physique, and the children are adorable. The women are well dressed in the manner of other European countries, though the stiletto heel made no more sense to me





in Iceland than it does in London! The faces of the Icelandic people are not smiling faces, but the lack of smiles in no way suggests an unhappy race. We found them grave and serious, rather in the manner of people who are about to tackle heavy tasks with purpose and calm intent, but not with any sense of oppression or despondency. All seemed to have youth on their side and we literally did not see one aged Icelander all the time we were there. Only the tourists appeared bowed down with years!

Education does not cease at 15 years of age. Wherever we went and at every hour of the day and night, radio sets blared in our ears. No music-while-you-work for the industrious Icelander, but lectures-while-you-work is their idea of radio. No wonder the standard of education generally is so high and the people with whom one deals so well informed.

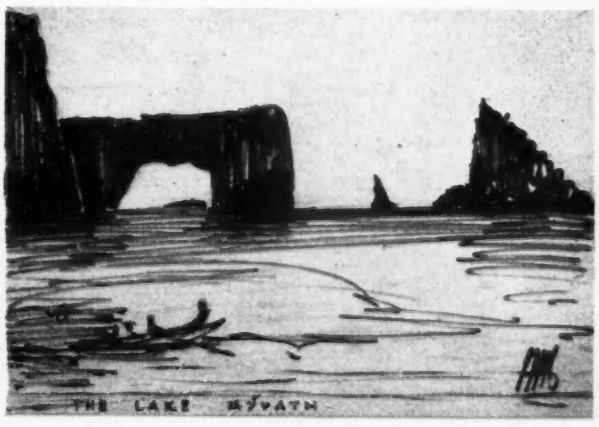
Iceland's Economic Problems

Iceland, with its population of 140,000 inhabitants, is the youngest nation in Europe. The people are descended from Scandinavian stock, but in the thousand years or so of their habitation there, they have made little mark on history. Hitherto, practically their only industry has been the age-old occupation of primitive man—catching fish. This is still their main source of revenue, and I felt sorry to think that we in England, with all our industry and commerce, should find ourselves in a fishing war with this people. The population is growing very rapidly and development is trying to keep pace with it. The soil is difficult to cultivate and we saw a good deal of mechanisation in places where the land is being farmed. There is pasture for cattle, and sheep wander about the hillsides to be called in twice a year for clipping and lambing. We were told that labour for the land is almost impossible to obtain, the great move being to the towns: this means mainly Reykjavik, which is consequently suffering from a housing shortage.

In half a century Reykjavik has increased its population from 6,000 to 70,000. There is a great sense of determination to make Iceland a prosperous nation, despite its natural handicaps and lack of raw materials and timber, and I admired this spirit greatly. They seemed to me very much a people of the twentieth century, ready to invoke all the aids of modern science to transform their barren country from ice-age conditions to a state of thriving industry and fertility, and they are already beginning to shows signs of success. Vast areas of one-time barren land are being grazed by cattle and sheep. Electricity is being generated by hydro-electric power from the fast-running rivers and waterfalls and there seems no limit to this supply. Even the most isolated farms have their electricity supply. New farms are developing on the collective principle. The hot springs are, of course, a tremendous national asset and I believe the full potential of these for industrial development has not yet been fully realised. The fishing is unrivalled.

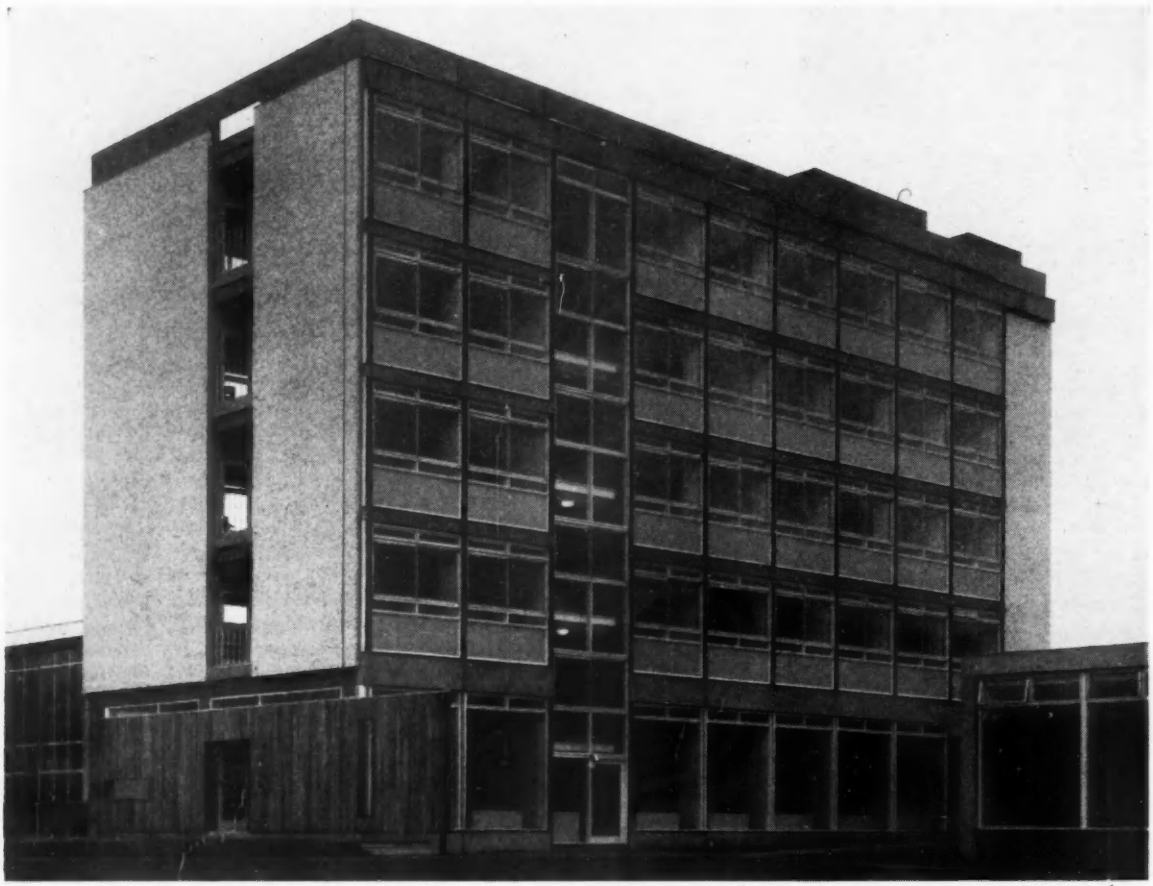
New building is going on apace with all this industrial development. Housing needs appear to predominate and I saw houses and flats going up in Reykjavik with one or two 10-storey blocks, but nothing, alas, of note. The new flats are all in reinforced concrete from wooden shuttering and the design is 'pre-war modern.' All the scaffolding appears to be timber.

The artist who would seek inspiration in Iceland, as well he may, will find it in the works of God rather than the works of man. Icelandic man has had his thoughts and hands well occupied over the centuries of his habitation in his endeavours to ensure a civilised survival for posterity there, and he has not yet had the opportunity or the safe leisure to pursue the luxuries of art and culture enjoyed by older civilisations of the world. But I believe his time will come, and I am glad to have seen something of this young, thoughtful and industrious people at the beginning of their rise to fame.



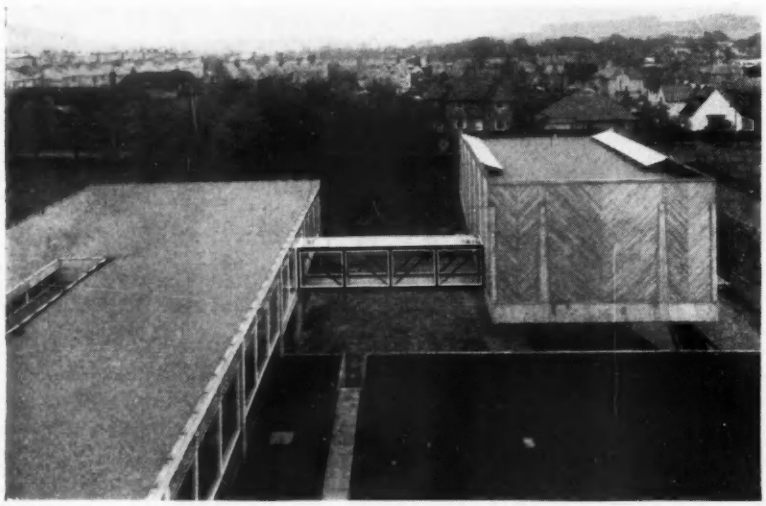
Edinburgh University Engineering Building

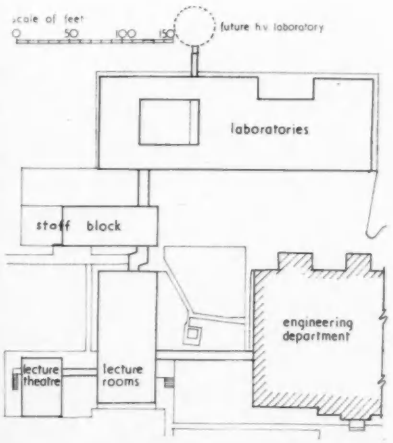
ROBERT GARDNER-MEDWIN, architect, in association with
STEPHENSON, YOUNG & PARTNERS, architects
CRUDENS LTD., general contractors



library and staff block

glazed bridge link between classrooms and lecture theatre





SITE PLAN, Scale: 1 in. = 160 ft.

THE NEW GROUP OF BUILDINGS, associated with the existing engineering building, provides workshops and laboratories for electrical and structural engineering and new teaching and staff accommodation.

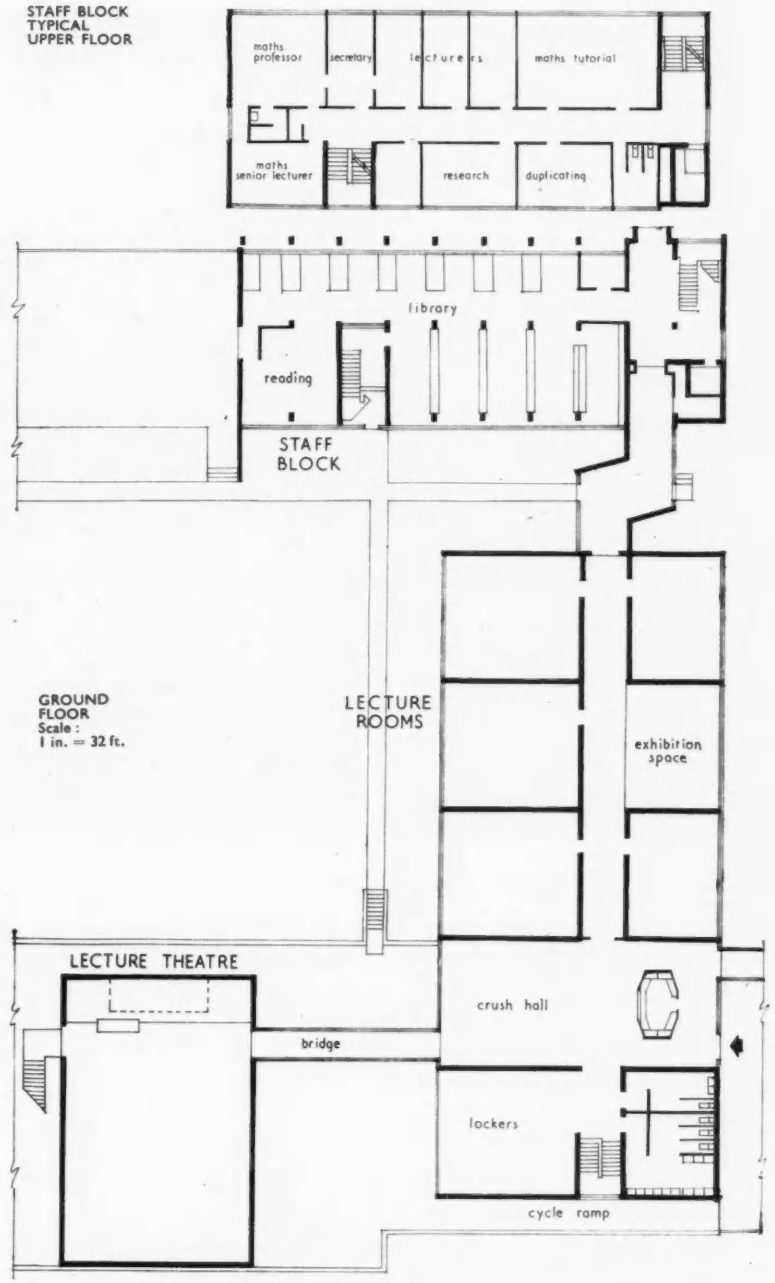
The site, on the edge of the Braid Hills, falls some fifteen feet from south-west to north-east. This fall has been exploited, by forming a sunken court at the eastern extremity, to provide an enclosure for the students' common room on the lower ground floor. Dominating the sunken court, and rising out of a rectangular pool, is the lecture theatre. The structure, of reinforced concrete with timber cladding, has a plastic form recalling the modelling of a wrist and hand. A light steel and glass bridge links the theatre to the crush hall in the classroom unit, allowing heavy demonstration material to be wheeled into the theatre from the workshops without a change in level. In the 'wrist' is housed the air conditioning plant.

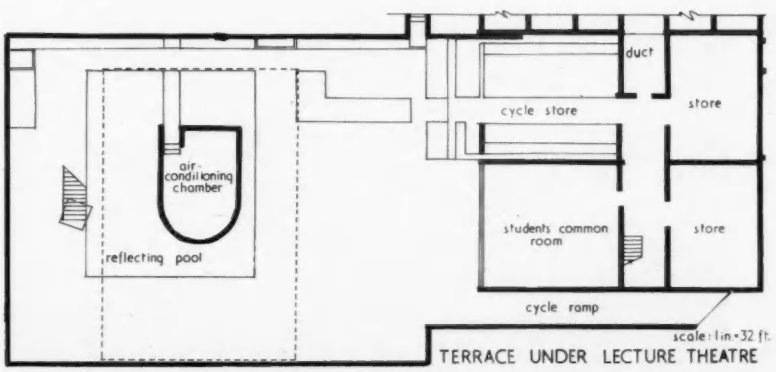
The general planning concept has been to disperse the accommodation, according to function, in separate but linked buildings. These buildings vary appropriately in their structural systems; e.g., the 2-storey laboratory and drawing office unit is in exposed welded steel, lightly clad in plywood and aluminium, and easily adapted or extended; the 5-storey library and staff room unit is on a reinforced (partly pre-stressed) concrete frame, clad on the ends with mosaic lined brick and in the window spandrels with grey stove-enamelled insulated panels; the classroom unit (largely single storey) has structural brick party-walls; the theatre is reinforced concrete, the upper part clad with hardwood planks between in situ portals. The use of constantly proportioned aluminium windows throughout assists the unity of the group.

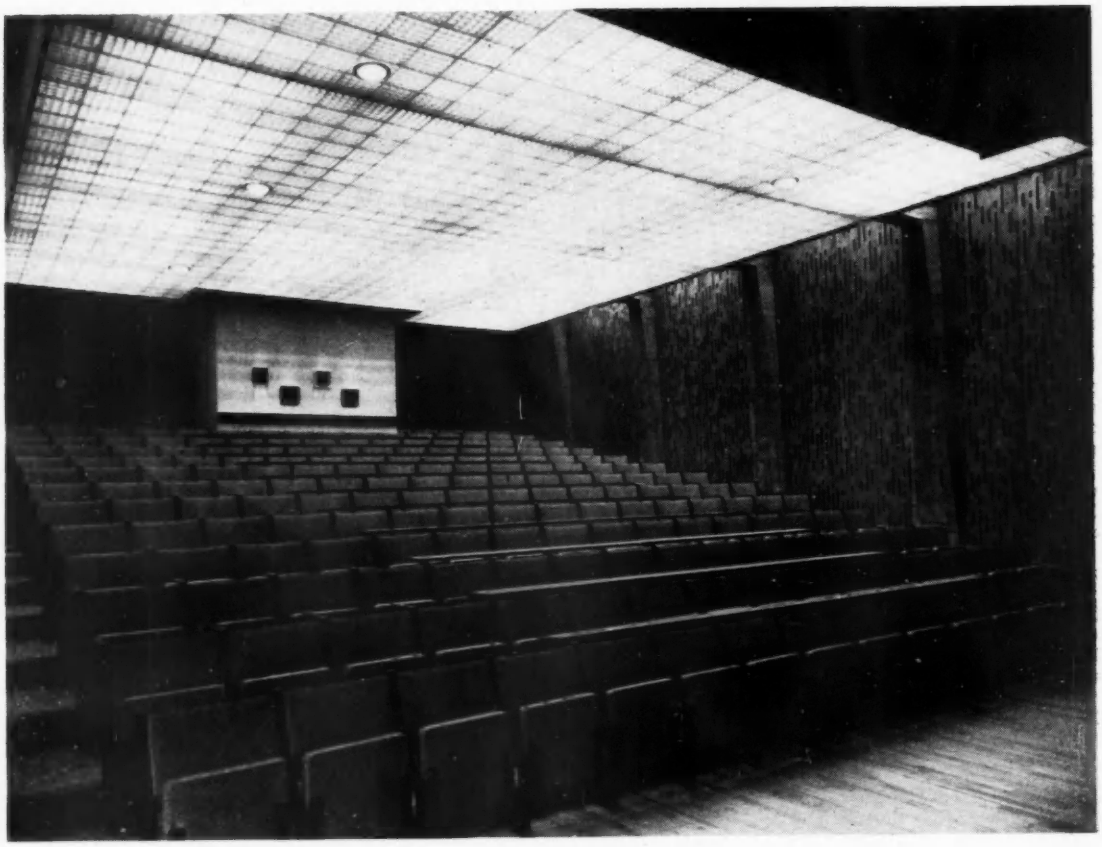
Executive architect: William Knight; architectural assistants: Anthony Kneale, James O'Donahue, Devaprosad Chakravarti, Stuart Russell, George Wilkie; structural engineers: Blyth and Blyth; quantity surveyors: Todd and Ledson; clerk of works: W. Clerihew.

sub-contractors & suppliers:

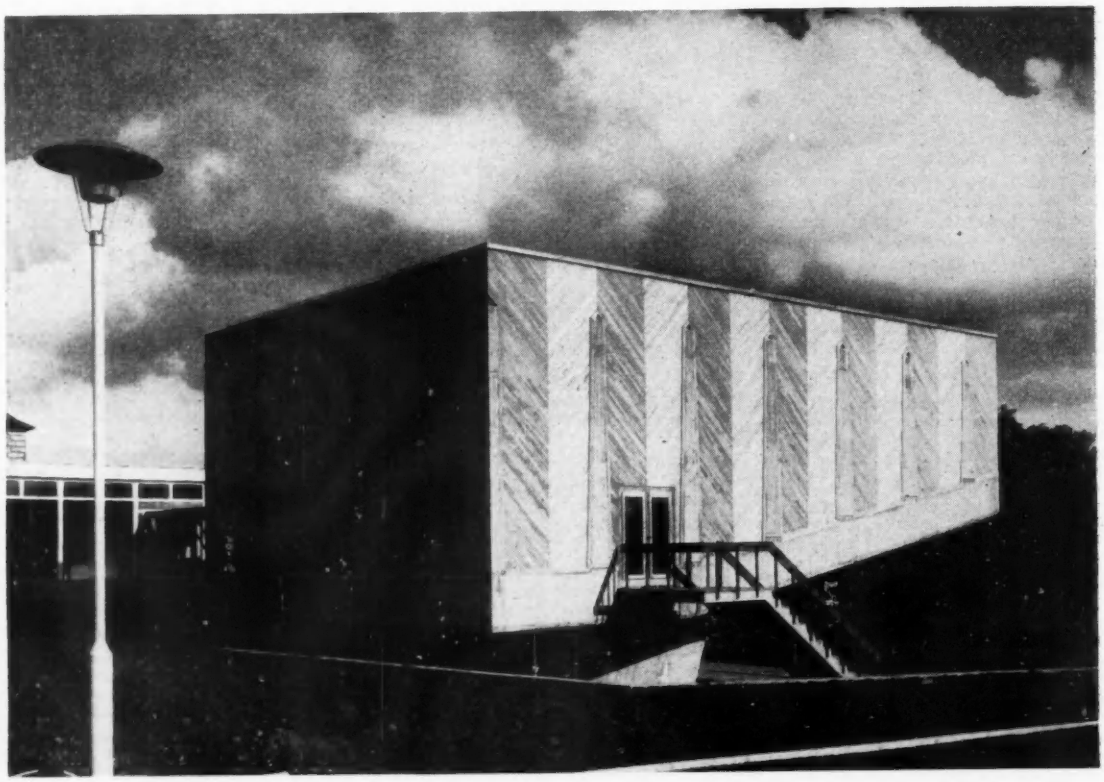
Steelwork: Redpath Brown Ltd.; *heating & ventilating:* Richard Crittall & Co. Ltd.; *electrical:* Wm. Allan Smith & Co. Ltd.; *precast concrete floors and roof:* James K. Millar & Co. Ltd.; *thermoplastic floor tiles & asphalt tanking:* Limmer & Trinidad Lake Asphalt Co. Ltd.; *mosaic and terrazzo:* Toffolo Jackson & Co. Ltd.; *core rail and balustrading:* Marley Tile Co. Ltd.; *felt roofing:* Wm. Briggs & Sons Ltd.; *fencing:* Ross Contractors; *windows:* Quicktho (1928) Ltd.; *glazing:* Northern Glazing Co. Ltd.; *electric lifts:* Glasgow Engineers Ltd.; *acoustic materials:* Hermeseal Acoustics Ltd.; *bituminous macadam paving:* W. G. Walker (Edinburgh) & Co. Ltd.; *scaffolding:* J. & W. Henderson Ltd.; *linoleum flooring:* Neuchatel Asphalt (Contracting) Ltd.; *blacksmith work:* S. & P. Blair, Peter Heatley & Co.; *window blinds:* Accordo Blinds Ltd.

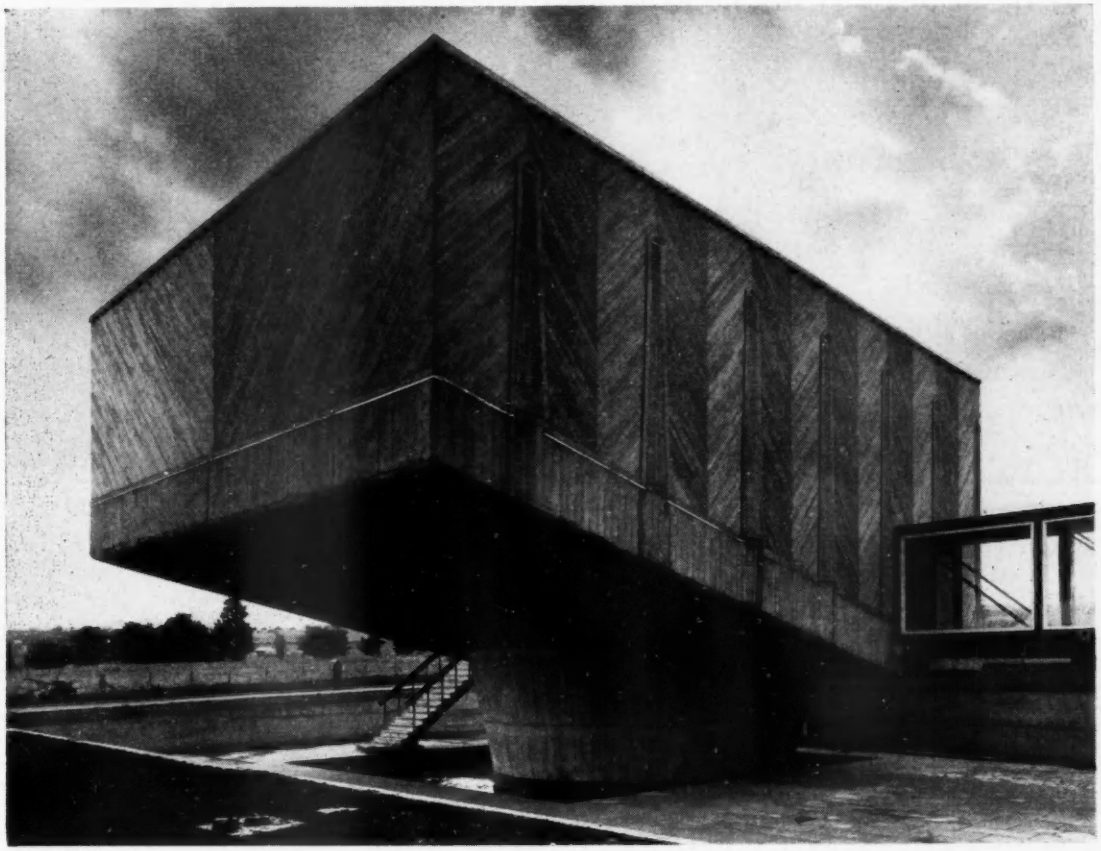






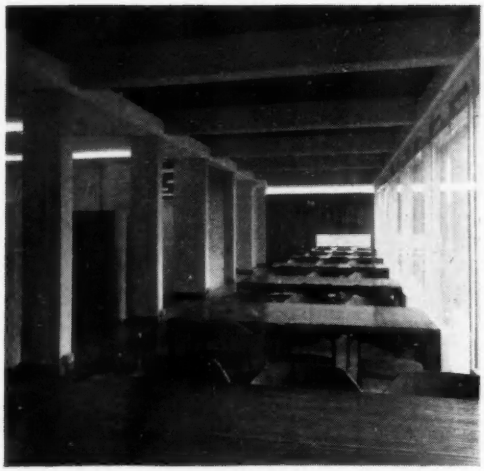
lecture theatre interior towards projection room; below, view from south





sunken court with decorative pool at base of theatre, and interior towards lecturer's table

1



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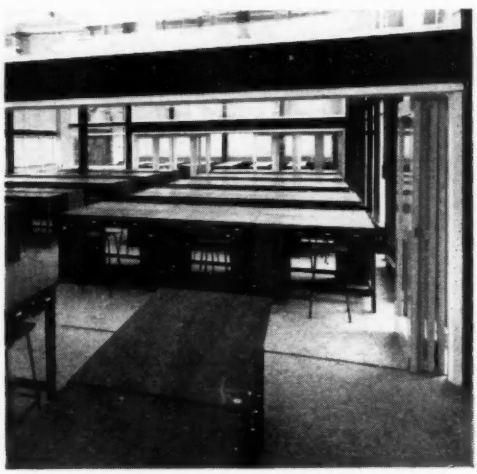
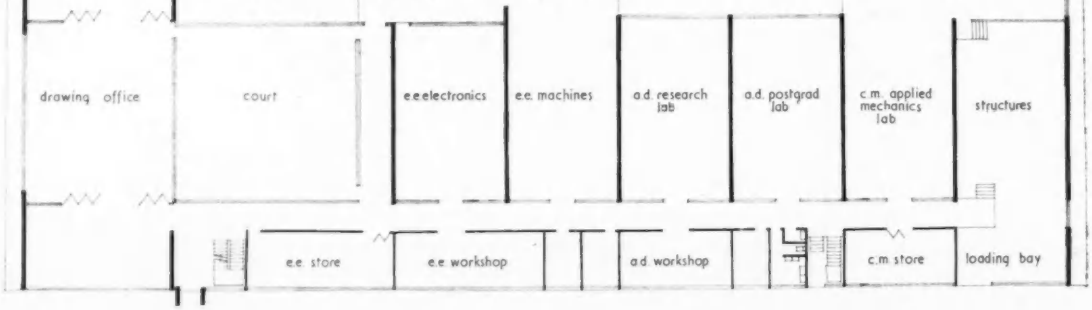


4

1. corridor and exhibition space in the lecture room block. 2. students' library on ground floor of staff block. 3. open tread staircase on steel stringers in the engineering laboratory block. To the right is a covered link to the staff block. 4. drawing office, in engineering block. Sliding partitions allow use as one large room or division into three rooms. Below, ground floor plan of engineering laboratory block, scale: 1 in. = 40 ft.

Edinburgh University Engineering Building



News of Week

News from the RIBA

A LONG DEBATE on the report of the Practice Committee on fees for local authority housing took place at the meeting of the RIBA Council on January 10. The report, which proposes a higher scale of fees, was approved in principle, but it was nevertheless decided to refer the matter back to the Practice Committee for further clarification of a number of points, including such matters as the employment of consultants and different fees for houses and flats.

This was stated by Sir William Holford, PRIBA, at his Press conference on January 11 following the previous day's meeting of the Council. One of the proposals made in the report, which Sir William said was 'warmly approved' by the Council, was that special fees for housing should be abolished, so that all work carried out by architects would be subject to the one scale of fees approved by the Royal Institute. Thus any reduction for housing would simply arise on the basis of repetitive work, under the single scale of fees.

Sir William pointed out that the proposed new scale does not affect any existing agreements, and also that RIBA fees are intended to be minima so that, theoretically at least, an architect can ask for a higher fee than is laid down in the scale.

* * *

SIR WILLIAM HOLFORD also announced that a very wide application had been received for attendance at the forthcoming IUA Congress, in London. At the end of December 600 such applications had been received from 33 different countries. Registration was, however, 'a little slow from architects in the UK.'

Speaking of the Architects Benevolent Society, the President said that the direct appeal by post to architects to subscribe to the Society had met with considerable success. As a result some £7,000 will be available for distribution this year compared with £5,000 last year. This was particularly welcome news in view of the increasing demands being made upon the ABS.

It was also announced that the RIBA award for Distinction in Town Planning has been conferred on Mr. Eric Lyons, FRIBA. It was interesting to note, said Sir William, that Mr. Lyons had been honoured for his work in private enterprise housing.

Chain of British Motels Proposed

MR. CHARLES FORTE, chairman of Forte's & Co., owners of the Café Royal and Criterion Restaurants and the National Sporting Club, is proposing a scheme for the erection of a chain of motels throughout Britain with the exception of the Scottish Highlands. Each motel will be individually designed and will include a petrol station and a restaurant. The estimated cost of each unit will be in the region of £250,000. The promoters propose to engage the services of various architects to carry out the work. Mr. H. R. Henshaw, at the Café Royal, 68 Regent-street, W1, is handling the scheme on behalf of the company.

Professional Announcements

MESSRS. BRYDEN & WOODFORD, chartered quantity surveyors, of London and Sheffield have taken MR. BRIAN MITCHELL, ARICS, into partnership. Mr. Mitchell will continue to be resident at 28 Wilkinson-street, Sheffield 10 (tel.: Sheffield 23552).

MR. HARRY FINLAY, ARICS, chartered quantity surveyor of 12-15 Great Turnstile, WC1, has moved his office to Fenwick House, 289-293 High Holborn, London, WC1 (tel.: Chancery 4888, unaltered).

MESSRS. DONOVAN H. LEE & PARTNERS have moved to new offices at 66 Wilton-road, Victoria, SW1, but the telephone numbers remain unchanged (Victoria 4287/8). MR. GEORGE KEE, BSC, MICE, has recently become a partner and MESSRS. K. J. BROWN, MSC, AMICE, M. K. CZECHOWSKI, E. F. WALL AND E. J. WILLIS, are new associates.

'The scaffolding's full of tea all day — we're just about sick of it. . . .!'

Coming Events

MONDAY, JANUARY 23

RICS.—'Some Reflections on Property Development,' by Mr. E. C. Uran. 12 Great George-st., SW1. 5.45 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (MERSEYSIDE PANEL).—'Prestressed Concrete and CP 115,' by Mr. A. J. Harris. Liverpool University, Brownlow Hill. 6.30 p.m.

INSTITUTE OF QUANTITY SURVEYORS (NORTH WEST BRANCH).—'Towards Greater Efficiency (A Confabulation).' Speaker: Prof. Denis Harper. Manchester College of Science and Technology. 7 p.m.

TUESDAY, JANUARY 24

COMBUSTION ENGINEERING ASSOCIATION (NORTH WESTERN REGION).—'Heating and Ventilation Problems,' by Mr. J. B. Atherton. Engineers' Club, Albert-sq., Manchester. 2.30 p.m.

INSTITUTION OF CIVIL ENGINEERS.—'The Choice of Protective Schemes for Structural Steelwork,' by Mr. F. Fancutt and Mr. J. C. Hudson. Great George-st., SW1. 5.30 p.m.

RIBA.—President's address to students. Criticism by Mr. R. H. Sheppard of work submitted for prizes and studentships. Presentation of prizes. 66 Portland-pl., W1. 6 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS (SCOTTISH BRANCH).—'The Provisions of the Revised British Standard for the Use of Structural Steel in Building,' by Mr. W. C. Andrews. Institution of Engineers and Shipbuilders, 39 Elmbank-cres., Glasgow. 7 p.m. (to be repeated on January 25 at Heriot-Watt College, Edinburgh, at 6.30 p.m.).

BBC, NETWORK THREE.—Discussion on 'Site Organisation,' by C. Crichton, E. Mills, K. J. Pearce and R. Mais. 7.30 p.m.

WEDNESDAY, JANUARY 25

ARCHITECTURAL ASSOCIATION. — Exhibition of photographs by members and students. 34-36 Bedford-sq., WC1. Until February 17.

BRITISH INSTITUTE OF MANAGEMENT.—Foreman Training Conference. Connaught Rooms, Gt. Queen-st., WC2. 9.30 a.m.

HERTFORDSHIRE CC.—Symposium: 'Microfilm in the Drawing Office.' Hatfield Technical College. 10.15 a.m.

COMBUSTION ENGINEERING ASSOCIATION (MIDLAND REGION).—'Efficient Use of Gas in Industry,' by Mr. A. C. Jennings. Birmingham Exchange and Engineering Centre, Stephenson-pl., Birmingham 2. 10.30 a.m.

RICS.—Reception for newly-elected members. Presentation of diplomas by the President. 12 Great George-st., SW1. 3 p.m. (to be repeated on 26th and 27th).

ROYAL SOCIETY OF ARTS.—Alfred Bossom Lecture: 'Architecture in Transport,' by Mr. F. F. C. Curtis. John Adam-st., Adelphi, WC2. 6 p.m.

VICTORIA AND ALBERT MUSEUM.—'Engraving Glass for Coventry Cathedral,' by Mr. J. Hutton. South Kensington, SW7. 6.15 p.m.

INSTITUTE OF BUILDERS DISCUSSION CLUB (MAIDSTONE AND DISTRICT CENTRE). — Film show. Royal Star Hotel, Maidstone. 7.30 p.m.

THURSDAY, JANUARY 26

INSTITUTION OF STRUCTURAL ENGINEERS.—'The Design and Construction of Extension to British European Airways Engineering Base at London Airport,' by Mr. P. B. Edwards. 11 Upper Belgrave-st., SW1. 6 p.m.

FRIDAY, JANUARY 27

SOUTHERN COUNTIES FEDERATION OF BUILDING TRADES EMPLOYERS.—Annual meeting (10.30 a.m.) and luncheon (1.15 p.m.). Connaught Rooms, Great Queen-st., WC2.

BRITISH LIGHTING COUNCIL.—Office lighting exhibition. 16-18 Lancaster-pl., Strand, WC2. 11.30 a.m.

ART WORKERS GUILD.—Illustrated talk: 'The Ile de France and Gothic Architecture,' by Bro. F. Buist. 6 Queen-sq., Bloomsbury, WC1. 7 p.m.

RE SURVEYORS OF WORKS CLUB. — 16th annual dinner. Connaught Rooms, Gt. Queen-st., WC2. 7.15 p.m.

Poet's Corner

To the sceptical reader
Absurd it may seem
That the poet should ever
Be lost for a theme—
'Tis so; but there's something
More troublesome, which is
To have, as the French say,
Embarras de richesses!
A few of the topics
On which one might speak up:
Is the tea-break dispute
Just a storm in a teacup?
Then an excellent theme
For the resonant pedal—
Lewis Mumford's award
Of the Royal Gold Medal;
And what better text
Could the poet alight on
Than the views of Sir Hugh
On the bright'ning of Brighton?
Or the scheme for a second-tier
Class of assistants—
The arguments for
And, of course, for resistance—
Did poet e'er have
Such an o'erflowing cup
Of delectable themes?
Well, I just give it up!

ANON.

Letters to the Editor

The Architect and the Engineer; The Wages Award; Misnomers in Technological Terminology; A Tribute to the Technical Press

SIR,—Mr. J. B. Wikeley suggests ('The Builder,' January 6) that the question of whether the chief officer responsible for the architectural work of an authority should be an architect or a municipal engineer depends upon whether an architect working under the administrative control of a (municipal) engineer is thereby any worse an architect. This is a preposterous over-simplification, but there can be no doubt that architects work more efficiently and with more encouragement to advance creatively under one of their own profession than under a municipal engineer. The latter does not 'speak the same language,' is unable to give to his council the authoritative guidance and advice on architectural matters available from an architect chief officer and on these subjects is a mere mouthpiece of his chief assistant.

Your correspondent also queries the ability of the architect as an administrator and answers from his own necessarily limited experience when there are scores of county, city and borough architects' departments which by their achievements have shattered this peculiar illusion of municipal engineers that skill in administration is their monopoly.

Criticism is not confined to architectural design; the public have been known to comment adversely upon street paving, street lighting, refuse disposal and sewage disposal also. The die-hards among the municipal engineers must cease to regard architecture as just another of these multifarious activities of their profession.

LEONARD C. HOWITT [M.ARCH, DPA, FRIBA],
Sale, Cheshire.

The Wages Award: Absorbing the Cost

SIR,—I have just finished reading my evening local newspaper of January 11 wherein the following extracts were reported from the speech made by Mr. D. E. Woodbine Parish, President of the National Federation of Building Trades Employers, at the annual meeting of the Eastern Federation at Cambridge.

'The proposed building wages settlement—which would probably mean 6d. an hour rise from next October—need not lead to an inevitable rise in costs,' and continuing, 'If we as employers operate this new arrangement in the right way, it is reasonable to calculate that a large part of the increase would be absorbed, as the saving of unproductive time, previously paid for, could be considerable,' and that, 'much of the remainder of the wage increase can be taken up by other improvements in the running of our firms.'

It would seem that the reason why October, 1961, has been selected for implementing the rise was that it gives contractors plenty of opportunity to prepare for this when tendering, so ensuring that the rise be included in future contract amounts.

What puzzles me is that a recent statistical survey has shown that the building industry's prices are so intensely competitive that reasonable profits are impossible, and many contractors are, in fact, offering tenders below known costs, despite the present boom.

Would Mr. Woodbine Parish, in view of this, care to comment on how it will be possible to absorb some of the rise 'by other improvements in the running of our firms'? What practical suggestions has he?

When wet time working is necessary, surely this will now cost the contractor, at half rate, 2s. 9d. per hour instead of 2s. 6d. per hour. Does this extra have to be absorbed as well?

This form of comment, by an accepted leader of the industry, is surely rather misleading to the public in preparing them to resist an inevitable rise in building costs.

KENNETH C. BOLTON,
192 Marlborough-road, Swindon, Wilts.

*** The implications of the wages and hours award were given in statements made in London last week by Mr. Woodbine Parish and by Mr. Peter Trench and reported on page 138 of this issue. They answer some, at least, of our correspondent's questions. —EDITOR.

Misnomers in Technological Terminology

SIR,—In 'Concrete and Constructional Engineering' Editorial Notes Vol. LIV. No. 9, September, 1959, and Vol. LV. No. 3, March, 1960, it was pointed out that misnomers such as ferro-concrete had gradually fallen out of use, but others, for example pre-tensioned concrete and post-tensioned concrete, used to describe concrete which in fact is compressed, are still in use.

The term prestressed concrete in itself is unsatisfactory as it does not describe the nature of the stresses to which the concrete is subjected, and, owing partly to the ambiguity of such words, has led to some confusion in the minds of students and trainees on hearing the terms for the first time, particularly when referring to prestressed steelwork.

Unsatisfactory as the term is in the case of concrete, it is less desirable when applied to steel, which is subjected to various complex stresses and attendant shears when prestressed. A steel member may not necessarily be subjected to compressive stresses alone, nor is it essential to prestress the member by means of wires, strands or tendons.

CP 115 (1959) defines prestressed concrete as: 'Concrete in which effective internal stresses are induced, usually by means of tensioned steel, prior to loading the structure.'

This cannot be applied to steel, however, as tensioned tendons are rarely used for the purpose of prestressing. The most widely used method is to induce deformation stresses in the members of a framework; these stresses and their co-existant elastic strains being employed to negate the effects of secondary stresses in the structure.

BS 153 Part 3B (1958) does not define prestressed steelwork but Clause 21 (f) recommends: 'Structures may be prestressed to counteract the effects of secondary stresses, in which case it is permissible to ignore these stresses in the members relieved.'

Fortunately, terms such as pre-tensioning and post-tensioning do not apply in the steel industry, but it is likely that new words will come into use when technical advancements justify their invention, e.g. as designers are faced with full or partial elimination of secondary stresses the terms full or partial prestress may be brought into use; these terms are of course being used in the concrete industry today. Thus the same terms when used for both industries have different implications.

It is to be seen whether in future technological terminology is advanced to a state when it becomes intelligible to people in industries other than engineering, or remains as it is today, using misnomers and a hoard of misleading words.

A. MACKINTOSH,
38, Ashburn-place, London, SW7.

A Tribute to the Technical Press

SIR,—I would like to send to you and to your staff my best wishes for a happy and prosperous New Year. At the same time I would like to say thank you for the service you have given to us in the industry throughout the past year.

We place a high value on our technical journals and I am sure that this trust will never prove misplaced. To you falls the task of sifting and classifying the information that is needed if we are to function efficiently; and all the relevant information is passed from various sources to us in a condensed, but easily-read manner. Most important of all, this is done week after week, month after month and yet no really significant item ever appears to be omitted.

With the need for more and more mechanisation to make up for the shortage of labour, we shall make more demands upon you to introduce and describe the new machines which will inevitably come along. We are confident that your team will cope with this task as well in the future as they have in the past.

KENNETH HILL,
President, the Institute of Building Estimators,
10 Cromwell-place, SW7.

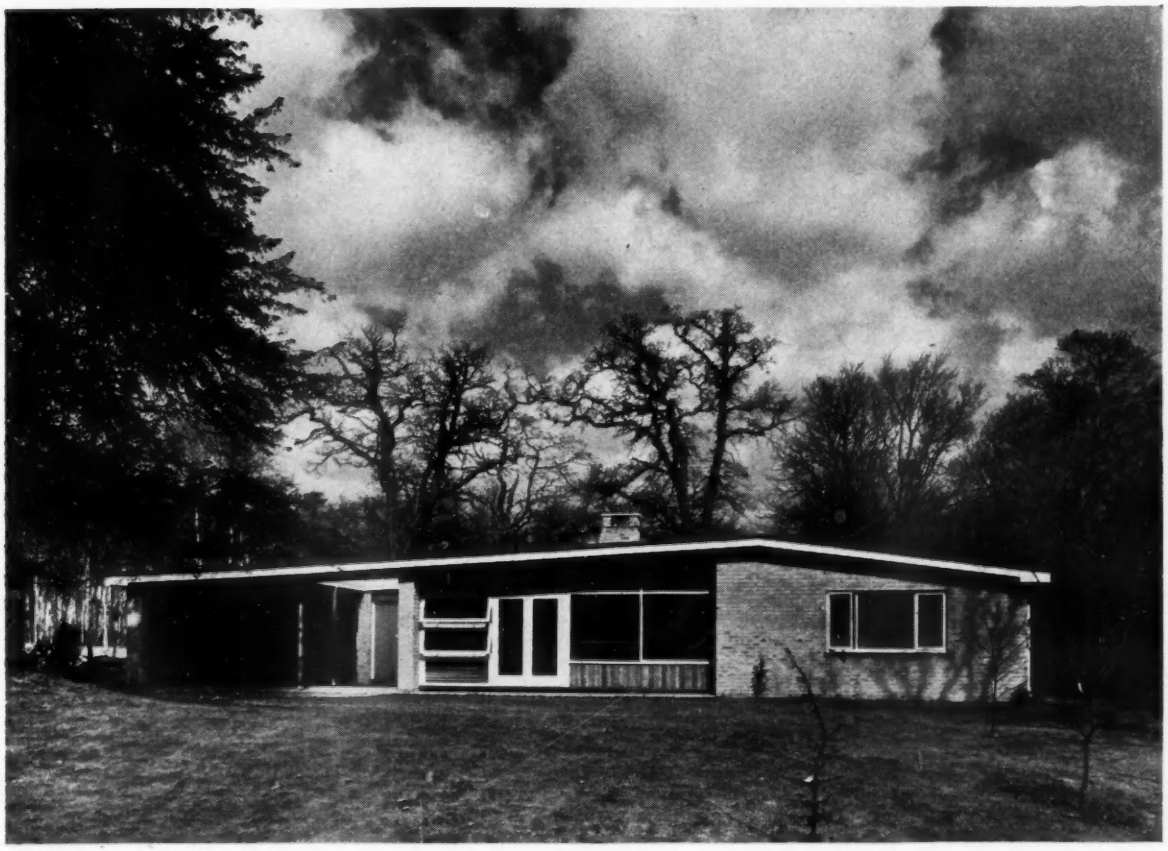
A Hundred Years Ago

From The Builder of January 19, 1861

TAYLOR'S DAMP-PROOF COURSE.—The 'damp-proof course,' as it is called, consists of a perforated slab of burnt clay, bedded in mortar, in lieu of asphalte, sheet-lead, or slates in cement, the joints being brought together dry. Mr. George Jennings, who has purchased the patent, urges for that it keeps down the damp; admits, in a much more complete manner than air bricks, of the introduction of air; and bonds the walls with an imperishable material of great strength.

House at Walton-on-Thames

HUGH SMART, DIPL.ARCH, ARIBA, architect
J. POULTON LIMITED, general contractor



main elevation and car port, from south

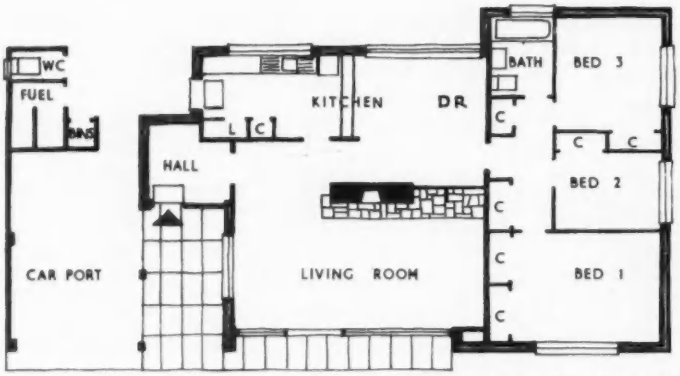
rear elevation

THE SITE was virgin woodland, bordering on the fringe of Burwood Park, and most of the matured oak, yew and silver birch trees have been retained.

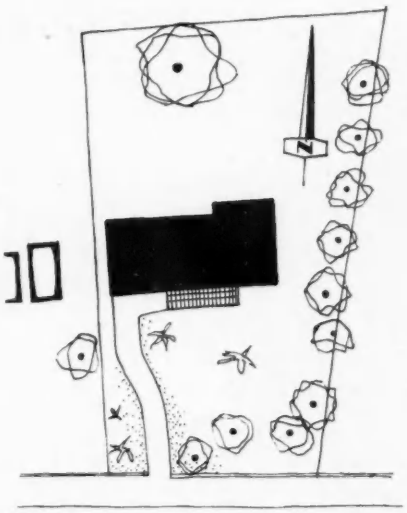
The plan consists of a large combined living and dining area, three bedrooms, kitchen, bathroom, combined car port and entrance way. To derive the maximum benefit from the southern frontal aspect, the living space was planned across the site at right angles to the bedroom wing which is accessible directly from the living area, thereby eliminating corridor space. The traditional garage has been replaced by a spacious car port, formed by an extension of the main low-pitched roof.

Walls are 11 in. cavity work, of brick outer skin and insulating block inner skin. The south wall of the living room is formed as a 21-ft. wide double glazed window unit, containing French windows for access to the front garden.

The roof is formed of three layers of asbestos based built-up felt roofing finished with limestone chippings laid over 2 in. stramit insulating slabs, on tanalised timber rafters

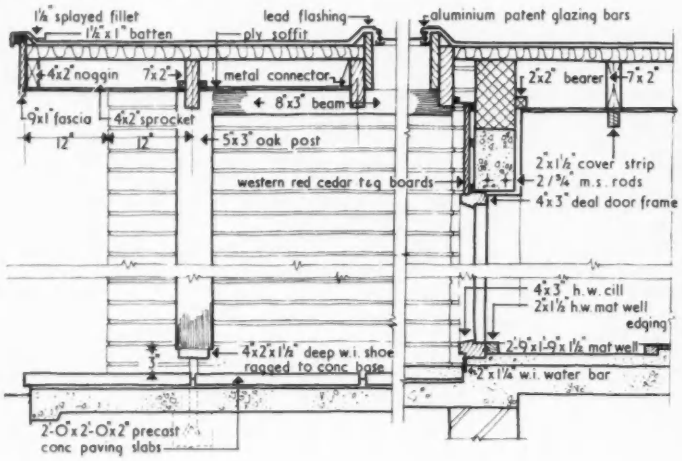


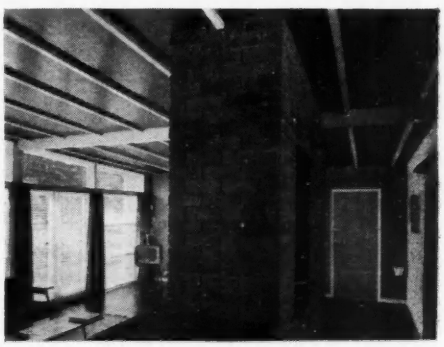
GROUND FLOOR, Scale : 1 in. = 16 ft.



SITE PLAN

FRONT PORCH DETAIL, Scale : 1 in. = 2 ft.

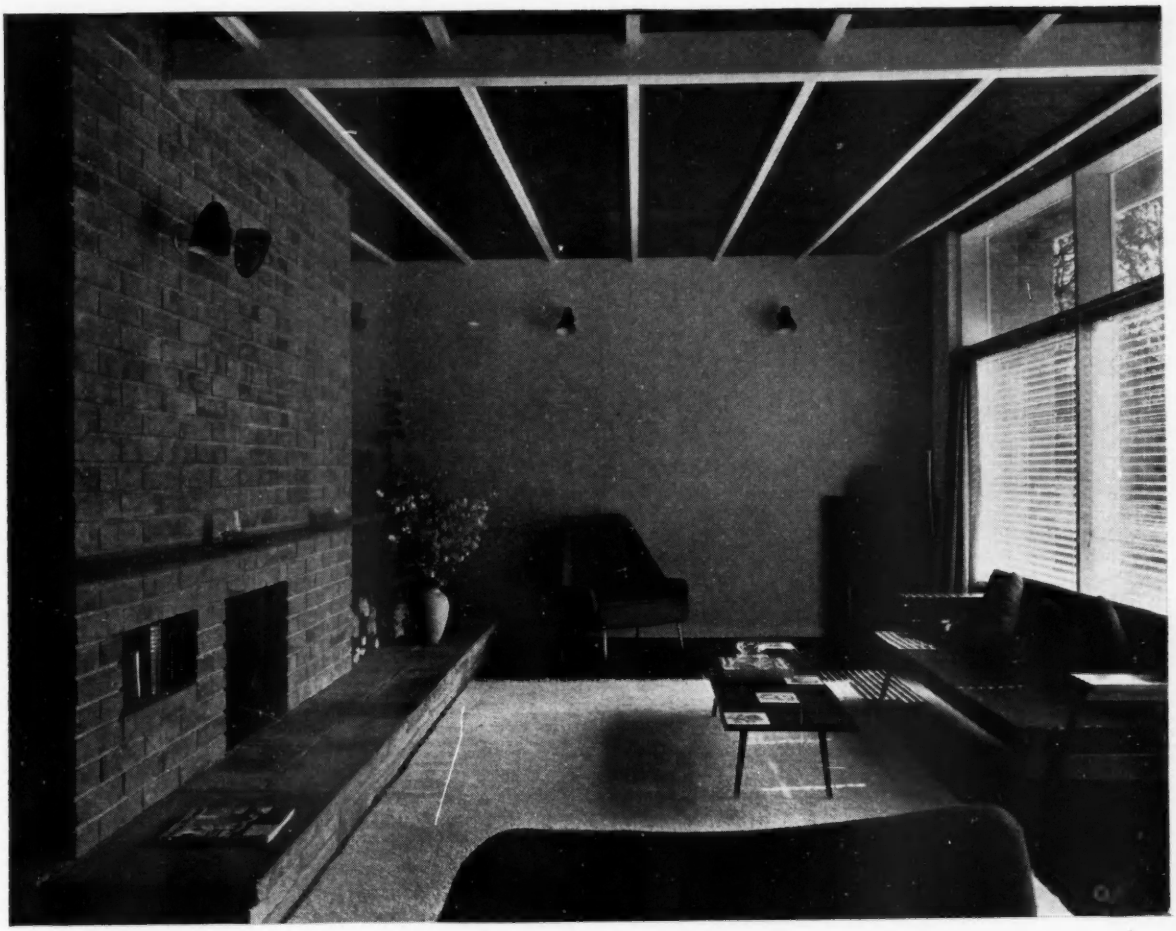




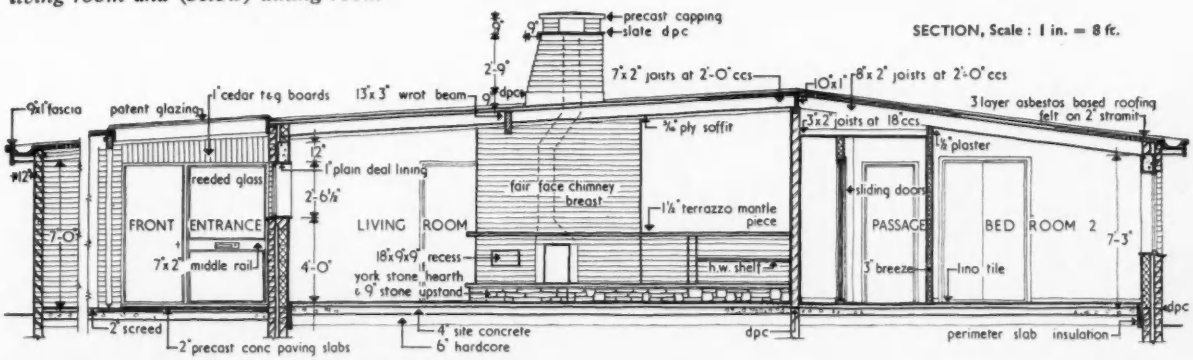
central freestanding fireplace

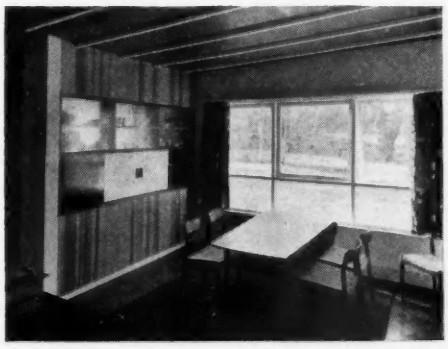
House at Walton-on-Thames

night view of front elevation



living room and (below) dining room





at 5 degree pitch. With the exception of the kitchen, bathroom and two smaller bedrooms, the ceilings throughout the house, including soffits to the deep overhanging eaves car port and entrance ways, are lined with mahogany faced plywood and fixed by 2 in. cover strips to the underside of ceiling rafters. Flooring is wood block with cork expansion strips, and vinyl asbestos tiles. Heating is by embedded electric under-floor cables, with a Sadia water storage heater for domestic hot water. The fireplace has Highbroom buff multi facings and raised York stone hearth.

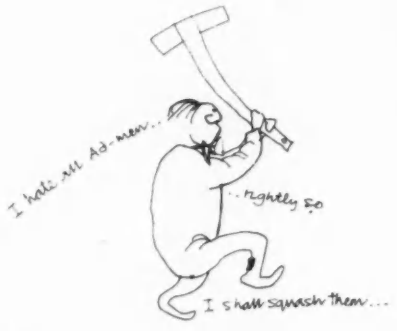
sub-contractors & suppliers :

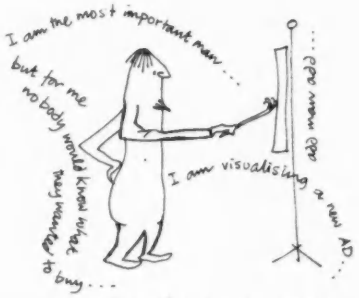
Felt roofing and Stramit slabs: Ragusa Asphalte; *sanitary goods:* W. N. Froy & Sons; *electrical installation & Panelec floor heating:* W. J. Bishop; *ironmongery:* Alfred G. Roberts Ltd.; *wood block flooring:* Hollis Bros.; *vinyl asbestos tiles:* Marley Tile Company Ltd.; *Highbroom facing bricks:* Richard Parton Ltd.; *exterior facing bricks:* C. R. Collins (Staines); *double glazing:* C. Clifford Ltd.; *Baxi fire:* Richard Baxendale & Sons; *terrazzo:* Malacarp Terrazzo Co. Ltd.; *lighting fittings:* Merchant Adventurers Ltd.

The Architect and the Ad-Man

A Fable of Modern Times

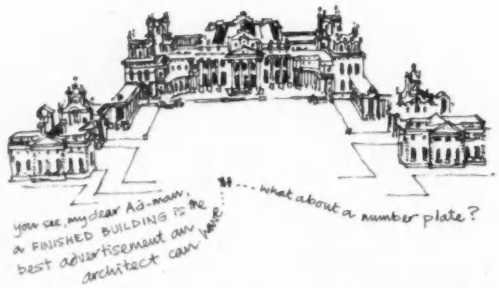
BY JOHN RAE

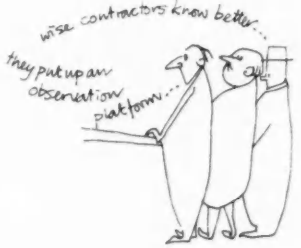




it is the architects' considered opinion
THEY SPOIL URBAN & RURAL ARCHITECTURE WITH THEIR INSANE DIRECTIVES & LITTER OUR SUBCONSCIOUS WITH THEIR DRIVELLING DITTIES
By order

ONCE UPON A TIME THERE WAS AN ARCHITECT WHO WAS SUSPICIOUS OF THE AD-MAN BECAUSE HE BELIEVED HIM TO BE SUPERFLUOUS TO THIS, OR ANY, CIVILISATION



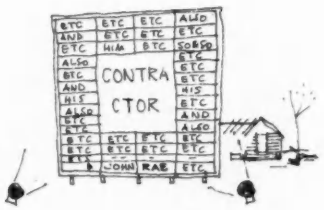


BECAUSE ON THE OTHER HAND THE ARCHITECT WHO INVITED PEOPLE TO

FURTHERMORE HE BELIEVED LANDSCAPES & BUILDINGS SHOULD BE UNADORNED

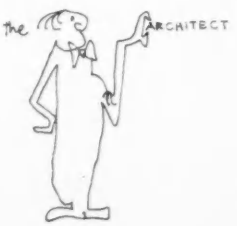
THIS OF COURSE ONLY WHEN THEY ARE FINISHED

...is because you have rejected my talents
... the contractor on the other hand uses them and puts up a bill board twice the size of the building ...



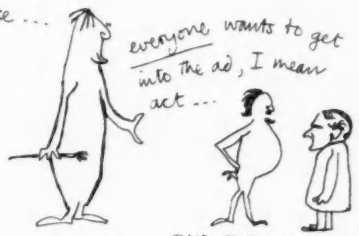
WATCH HIM WORK PROMPTLY LOST ALL HIS CLIENTS, & THIS, SAID THE AD-MAN

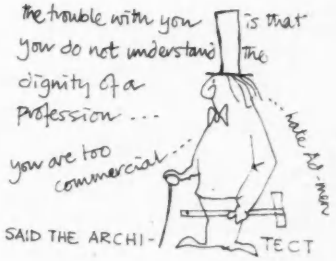
... and a crane supported by levitation on which he hangs a sign, & it is amongst all this SAYS THE AD-MAN that



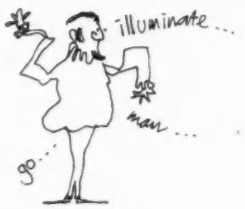
struggles for recognition in letters two inches high on a sign board whose sole purpose (THIS IS QUITE A LONG SPEECH, EVEN FOR AN AD-MAN) appears to be the advertisement of some

professional body because ...



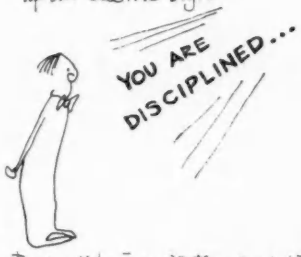

the trouble with you is that you do not understand the dignity of a profession ...
you are too commercial ...
hate ad-men
SAID THE ARCHI-
TECT

also your ideas are quite immature, if you said



as you probably would

& I actually did put up an electric sign



I should be immediately disciplined

and all my rich clients would say

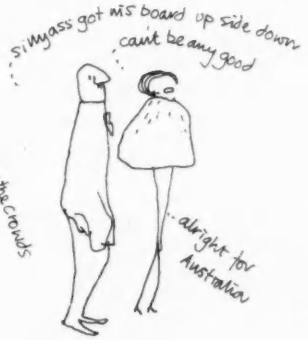
and go away

the same thing would happen if you said

and I stuck flags on it only then my LEFT WING clients would go

then if you came up with the OFF BEAT GIMMICK like

they would just say



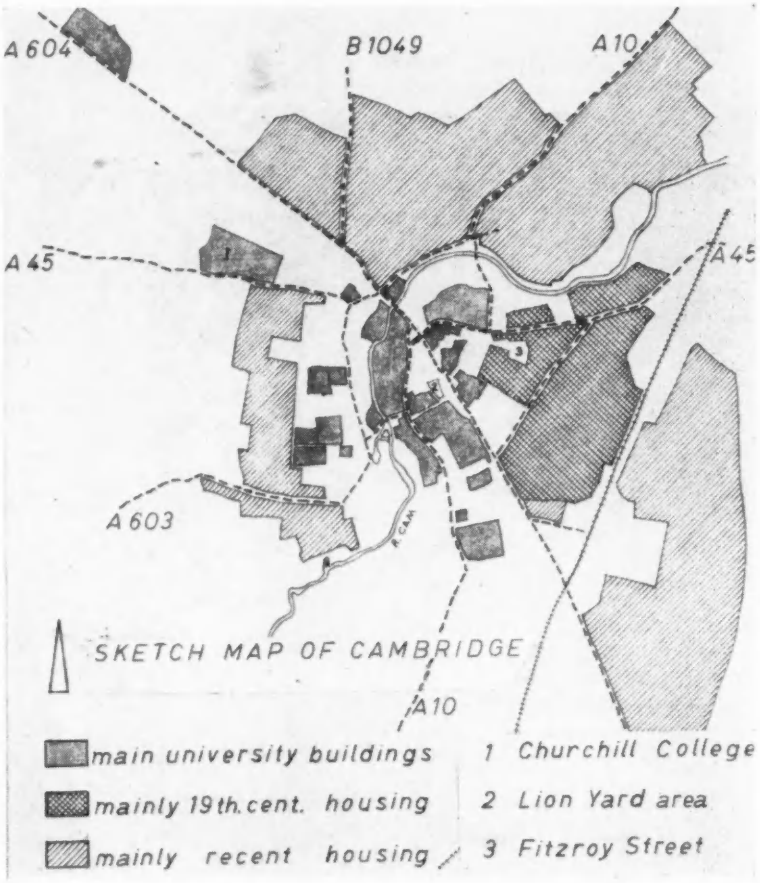
& I should have to

The Cambridge Scene, 1961

By David Croghan

WRITING in the 'Architectural Review' in August, 1952, critic J. M. Richards noted that 'there was once a time when our older universities set the standard of intellectual life for the whole country; perhaps less in the visual arts than in some others, but to a great extent even in these, since men of learning were, at least till a hundred years ago, also men of taste.' He regretted that this was no longer so: 'There seems not to be, in either the old universities, any awareness of what is happening in the arts in the contemporary world, nor any sense of what are contemporary issues.' His review of Cambridge building at that time found little that was not in style either period or modified Georgian, with an admixture of the merely non-descript.

Over the last eight years there has been a considerable advance. College dons are often younger and more travelled, and even those who have hardly moved beyond the University have been wooed into the present by the gentle buildings for Magdalen and Clare by David Roberts, who has ably demonstrated that modern architecture is not necessarily of concrete and glass. It is difficult to imagine that in 1960 the entrance block to Newnham College could be repeated (though Trinity's recent Angel Court and the University Chemical Laboratories exhibit much the same assertive dullness) and many undergraduates remain for three years in ignorance that the stone-mullioned building by the river at King's is not Gothic, nor even Gothick, but twentieth century. They would hardly think it possible, for many examples of modern design grow from foundations to curtains before their eyes, and everything seems in order with at least one section of the world, the architecture of Alma Mater. But is all so well?



Cambridge 'a Centre of Building'

Cambridge is today a centre of building, if only for the annual volume involved in present expansion and development; it is also a centre of new architecture, if only because of the number of well-known modern architects who are, or have recently been, working amongst its ancient monuments or in its surrounding gardens. Also, designs are to be seen from several of the 'top twenty' architects' offices in the country, those first gathered together in competition to design Churchill College. Where eight years ago Mr. Richards could find little better than the repaving of the main court of King's, there is now a controversial Arts Centre by Sir Hugh Casson on Sidgwick-avenue; the foundations of an exciting hostel, or rather, a complete court for Caius College by Sir Leslie Martin; and, on the hallowed eastern bank of the river (in Cambridge proper) there is a bold insert by Sir Basil Spence for Queens' College. The School of Architecture has built itself a new extension which was opened by Le Corbusier and Henry Moore. Though small, it is having an insinuating effect; many visitors appreciate its technical reason allied with strict economy of means, and few miss its spatial qualities. Denys Lasdun has designed a new college for Fitzwillam House, and Chamberlin, Powell and Bon have made proposals for New Hall. Richard Sheppard is building Churchill College on a suburban site near Cambridge. Here the completed flats for married graduates, built in a tight cluster when there was ample room to sprawl, suggest to many a new and highly desirable way of living in either town or country. Each of the nineteen flats in the two-storied group has two courts, and although there is some degree of overlooking, the standard of real privacy is far higher than is possible with the traditional garden strip, which does little beyond keeping traditionally designed houses at a hygienic distance from one another.

Where those responsible for the commissioning and design of public housing may gain from a visit to Storey's Way, those who build undergraduate accommodation might well pause on their way to Cambridge station. At 'Highsett,' Eric Lyons and Span Developments have attempted to show, with a phased development of courts, the continued validity of the 'collegiate' plan for domestic purposes. At the same time they have accepted the principle of a tall building, carefully sited, for a specific purpose; in this case that of providing a considerable number of small units of non-corporate non-family accommodation. Some College Councils have been unwilling to look ahead with a development plan, or even at the gaps left in their existing buildings, and are often too ready to commission an isolated block of arbitrary size and location. If this is not too near their own or someone else's present buildings, no High Table is offended, and the undergraduates are none the less grateful for running water and central heating.

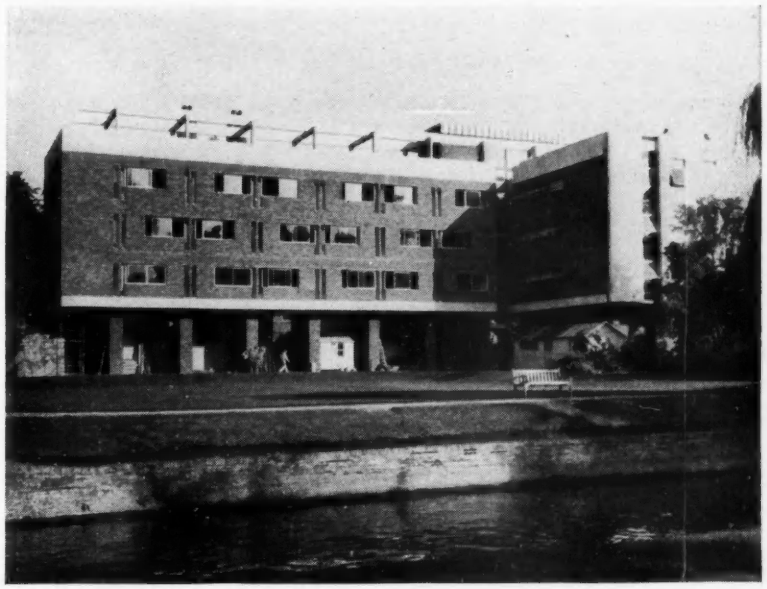
The Lion Yard Development

Private enterprise struck at Cambridge less happily in the Lion Yard, when a project for redeveloping this largely

derelict central area by Edger Investments was announced by the Local Planning Authority, the County Council, after a secret competition. The strength of feeling among private citizens, many significantly without vested interests in anything except the scale and convenience of the town in which they had chosen to live, and the policies of the University which has an equal but not conflicting interest in the continued development of a University City, came into the open when the Lion Yard was brought before a public inquiry. Here it was noted that the Civic Trust refused to assist with the 'defence' of Cambridge, and also that no architect would appear as expert witness for any objector. Possibly they considered that no comment was needed, or possibly they were too busy queuing to speak against the LCC/Cotton proposals for Piccadilly. However, the Minister, in one of a recent series of uncompromised opinions, made it quite clear that the Edger scheme was the wrong thing in the wrong place at the wrong time. His statement amounts to a vote of no confidence in the Holford-Myles Wright Cambridge Plan of 1950, and although the County Planning Authority may now complain that they have been officially misled for many years, the City and University can look towards a happy mutual sympathy in a future in which neither is likely to be drowned by the arbitrary creation of a regional centre in their midst.

The Edger scheme, financially suspect by City ratepayers, and comparable in scale (and attendant traffic) to much new building in the City of London and the West End, could well be replaced by one including a Civic Hall (in a form which would also serve University needs) and some moderate civic and commercial building, together with housing, the whole area being conceived as something of a breathing lung amongst visually dense blocks of existing university and commercial building. Cambridge might in this way gain a centre; at the moment it has only an indifferent Guildhall and a market place almost always covered with parked cars.

Although the University has offered to pay half the cost of an auditorium, such a scheme for the Lion Yard would admittedly never 'pay' the City, but neither, it seemed, would the Edger project, for this was to have been subsidised by the rates for sixty years. After this period, the citizens would have inherited a property which, in the normal course of events, would be obsolescent. There is ample room for long-life commercial development outside the confined area of the Lion Yard, which is no longer either the geographical or geometrical centre of modern Cambridge. Only four hundred yards away in Fitzroy-street commerce is flourishing by natural selection at a new centre, which may expand almost without limit for the loss of only low-quality nineteenth century by-law sprawl. However, even this development will choke itself unless some new road plan is adopted.

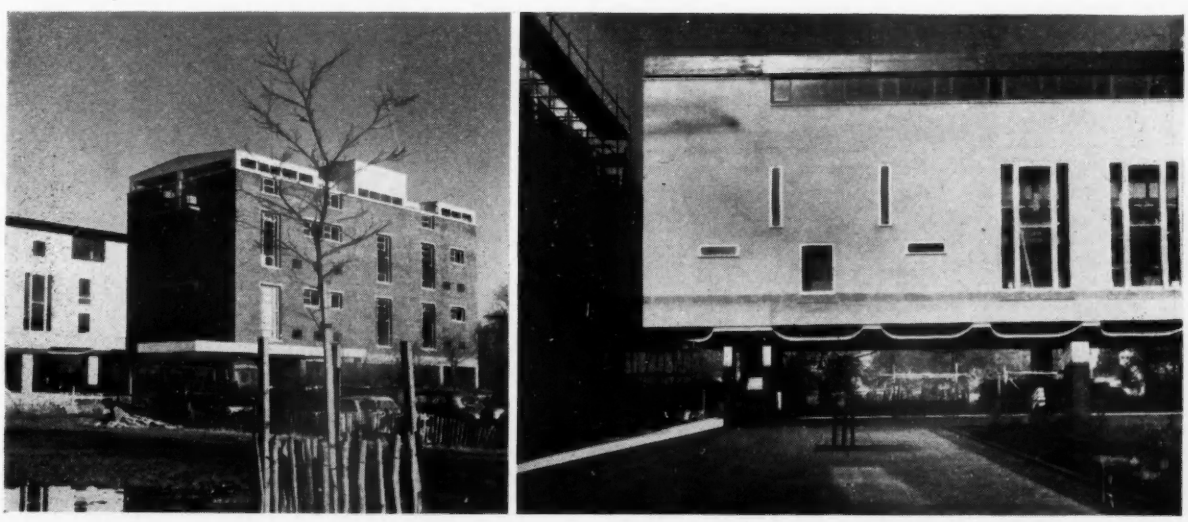


QUEENS' COLLEGE, *seen from The Backs. Sir Basil Spence & Partners, architects*

Cambridge's Road Problem

Cambridge, with its Y-shaped alignment of narrow streets converging in an almost unbroken ring of medieval college building, has a road problem potentially worse than that of Oxford. A pattern of by-pass and relief roads is clearly needed, but it must take note of

ARTS CENTRE, SIDGWICK AVENUE. *To left are library and lecture rooms (1959), to right Faculty accommodation, under construction in November 1960. Sir Hugh Casson, architect*



HIGHSETT, HILLS ROAD: *a Span Developments Ltd. scheme. Eric Lyons, OBE, FRIBA, architect*

SCHOOL OF ARCHITECTURE: *below, staff commonroom. C. St. J. Wilson and Alexander Hardy, architects. Right:* MAGDALENE COLLEGE: the *River building, with converted cottages. David Roberts, architect*

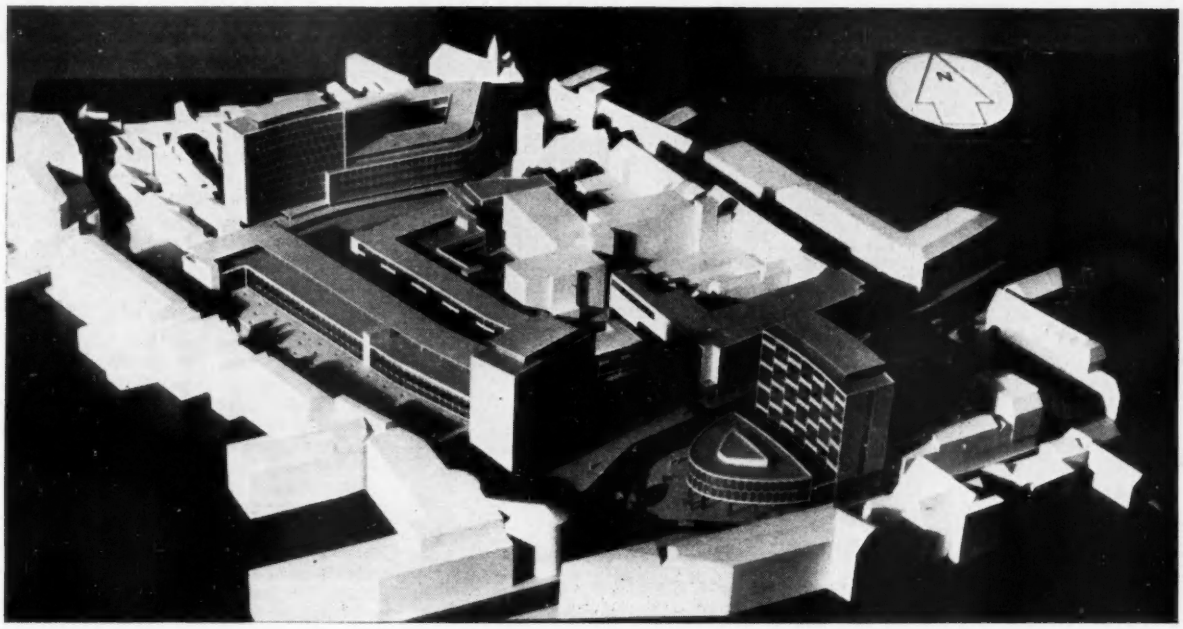
the existing city and university. Many would favour an entirely pedestrian precinct in the Lion Yard, perhaps with vehicles segregated below. Others, having seen American cities where road-widening has resulted in more cars moving more slowly than ever before, favour a policy of road-narrowing and bridge-closing until the whole centre of Cambridge is the preserve of pedestrians and cyclists outside shop servicing hours.

The Cambridge Plan, now due for its Cinquennial Review, shows a proposal for an inner road which seems prepared to thrash its 70-ft. width through what little housing remains near the centre, through priceless open spaces, and through the tails of two colleges. Areas scheduled for clearance to provide car parking along its route and elsewhere seem likely to complete the destruction of the present qualities of space and place unique to the one truly University City.

Modern Architecture in the Town

However, the energy spent restricting the worst excesses which may be practised in a city which does not yet possess an Architect or the power to plan itself, must not become negative and preserva-

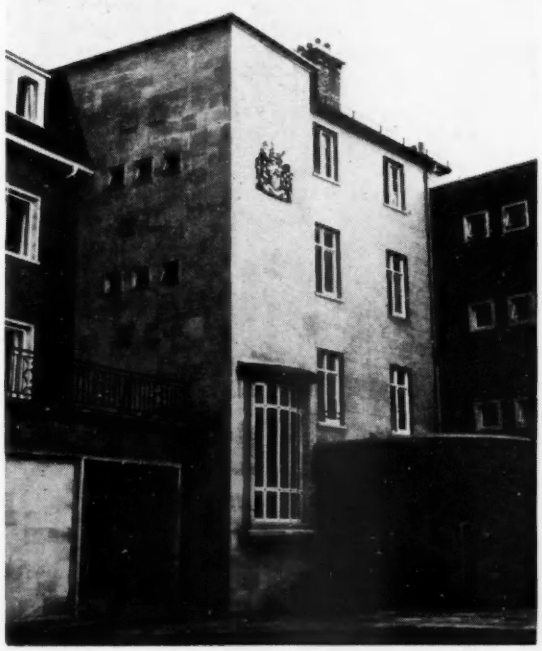
SCHOOL OF ARCHITECTURE: *shown left is the 'Skydome', used for daylighting research by the School of Architecture. David Croghan, architect (1960). To right of the picture is the extension to the School, Colin St. J. Wilson and Alexander Hardy, architects (1958). The daylighting research building, first of its type, is being financed by the Nuffield Foundation. The largest single element is the hemispherical covering dome, in form like a faceted crystal built up of 105 aluminium triangles, each over 6 ft. across. It follows the 'geodesic' principle pioneered by Buckminster Fuller, though the geometry is based on an Archimedian polyhedron. Access is by underground passage. Within is a 25 ft. diameter translucent plastic dome*



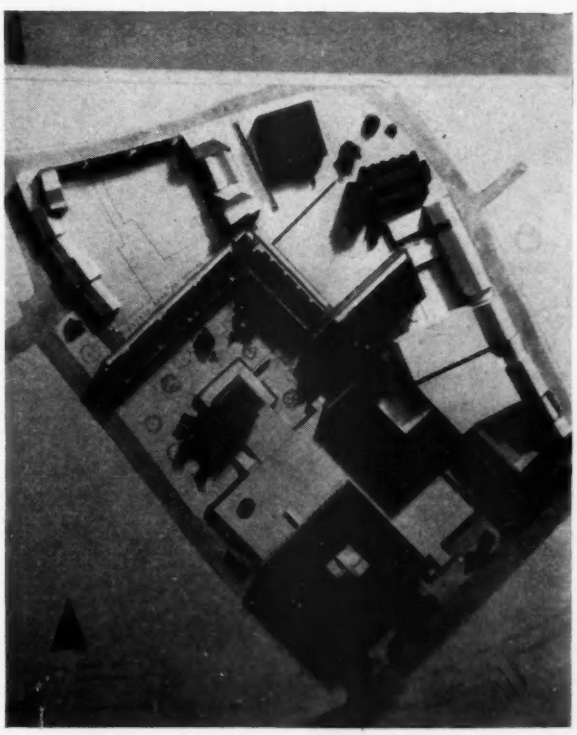
LION YARD REDEVELOPMENT: *view of model of development proposed by Edger Investments, Ltd., in association with Sir Robert McAlpine & Sons, Ltd., Stone, Toms & Partners, architects (1959)*

tionist. There must be a creative present, as there has been a creative past. New building and planning must replace old when a true need arises. Henry VI boldly swept away some college courts which were probably very similar to those still existing at Queens'. We now have in their place King's College Chapel and the Fellows' Building, both very satisfying though 200 years, but only 30 feet, apart. New and old have been shown to exist comfortably side by side at every stage in the last six hundred years, but King's and the Architects' Co-Partnership met heavy opposition when they first pro-

ANGEL COURT, *Trinity College. Designed by Husband & Co., structural engineers. Completed October 1959*



LION YARD REDEVELOPMENT: *student project by David Croghan and D. T. I. G. Davies, October 1957*



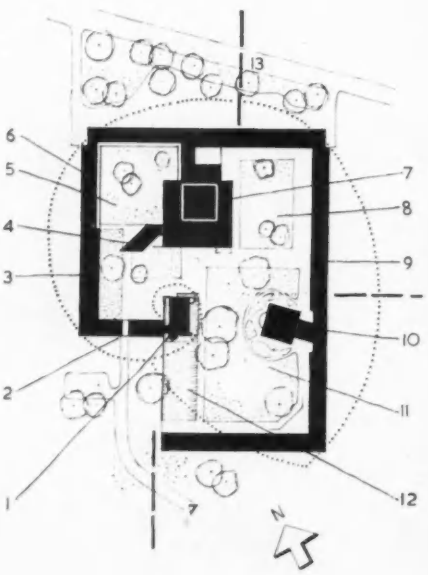
CHURCHILL COLLEGE: *A view of part of a model of Mr. Richard Sheppard's original design. Details may shortly be issued of a revised scheme*

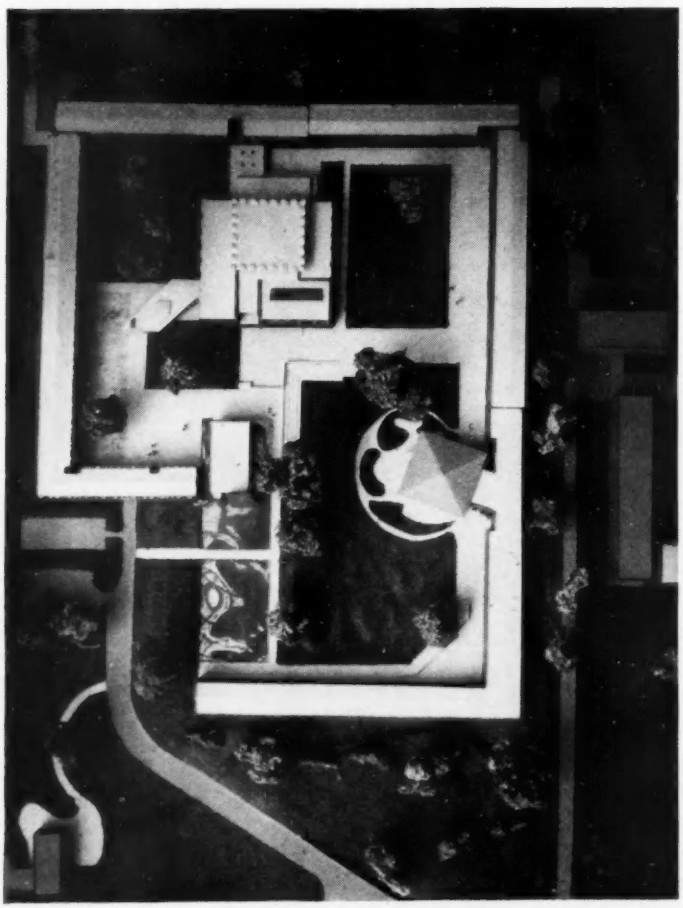
posed a new lodging house in St. Edward's-passage. The site was occupied by what was claimed to be a 17th century hotel, but no one had ever noticed it until its days were numbered. What they had noticed was the picturesque quality of a compact group of buildings, into which a vicious yellow tea-bar had been inserted with hardly a comment. The new building is now under construction and Modern Architecture, so often forced out to sites 'where it can do no harm,' will at last have a sympathetic urban setting. Just as a building among trees enhances and is enhanced, so may a new building amongst colour-washed plaster and irregular gables give that element of contrast which is so vital to visual enjoyment.

The Dons Debate

College dons, progressive in their own fields, are often diffident on visual matters—matters for which formal education hardly exists — but this does not always prevent them having an endless will to debate and change a preferred design. Even when they have gained the services of an Architect Knight, some physicist or literary critic will presume to redraw an elevation (still unfortunately 'architecture' to the majority) or to remove a storey on aesthetic grounds. A body of Senior Members of the University recently passed a 'non placet' (veto) in the Discussion on the proposed auditorium at Sidgwick-avenue by Sir Hugh Casson. The design was well advanced and presumably had already

FITZWILLIAM COLLEGE: *layout and view of model for a new college in Huntingdon-road. Denys Lasdun & Partners, architects. To be carried out in 3 stages: (1) accommodation for 9 resident dons, 61 resident undergraduates; (2) further rooms for 140 undergraduates; (3) accommodation for a further 8 dons and 150 undergraduates—a total of 17 dons and 351 undergraduates. Key to plan: 1 chapel, 2 main entrance, 3 undergraduate sets, 4 senior commonroom, 5 Fellows' garden, 6 Fellows' sets, 7 hall, library, lecture room, music room and commonrooms, 8 North court, 9 undergraduate sets, 10 existing house, 11 South court, 12 lake, 13 Huntingdon-road*





satisfied in detail a building committee, but the architect has had to retire to think up a new shape with which to enclose his foundations. Great architecture or even a consistent building is unlikely to result under such a regime. However, hope of better things was revived when the designs by Denys Lasdun for Fitzwilliam House were received with obvious approval, and he and William Howell have been appointed to explore, respectively, the possibilities for redevelopment on the two main University areas in the centre of Cambridge, the New Museums site and that of the Pitt Press.

The Spread of Patronage

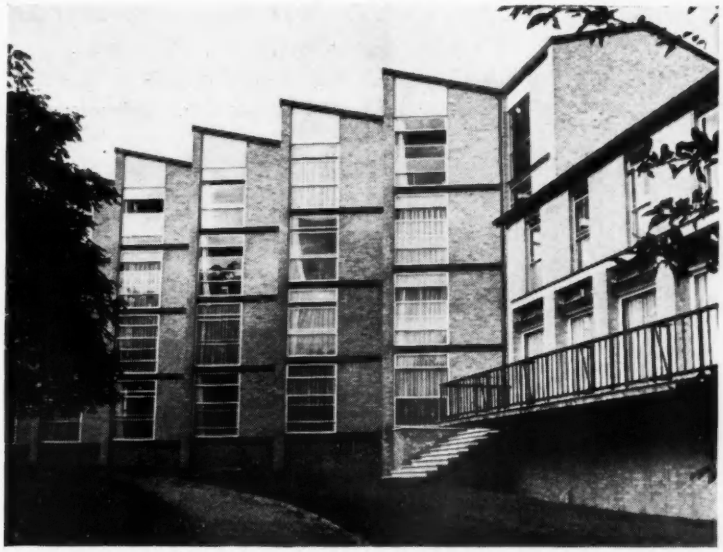
The great favour of University patronage, which in previous years was quite often safely restricted to one Great Man known to be solid and reliable, is now seen as spread among several architects who can offer imagination as well as competence. Nevertheless, life is not made too easy for them. Faced with almost certain opposition from some faction—it cannot often be called creative criticism—many architects have been inclined either to arm their designs with very personal qualities for which they are prepared to fight, or to include 'throw away' elements which can be eliminated as concessions in debate, or so it would appear. On the other hand, maybe the great seek to become greater by building monuments, and the less great are intimidated into self-consciousness. Whichever way it is, it will be intriguing to follow the fate of the Moorish roof of the hall in Denys Lasdun's design for the new Fitzwilliam college; the development of the many courts in Sheppard's winning design for Churchill College; and the final shape that will emerge at Sidgwick-avenue.

Cambridge Again Made Interesting

In 1961 the Cambridge scene is once again made interesting by architecture, even if it does not always have that clear concept of purpose and feeling of rightness seen before this present century. Two hundred years ago buildings were at once functional, individualistic, and self-effacing; there was then almost endless repetition in plan and detail giving an overall quiet and qualities which are always pleasing and often great. Yet no college court or University building can be confused with any other. Even the Chapel of King's, bay after bay of which seems stamped from the same mould, is but a calm explosion. Some of this cool inevitability is gained from the passing of years, yet much was there initially. Oxford is about to demonstrate it in modern times with the new St. Catherine's College.

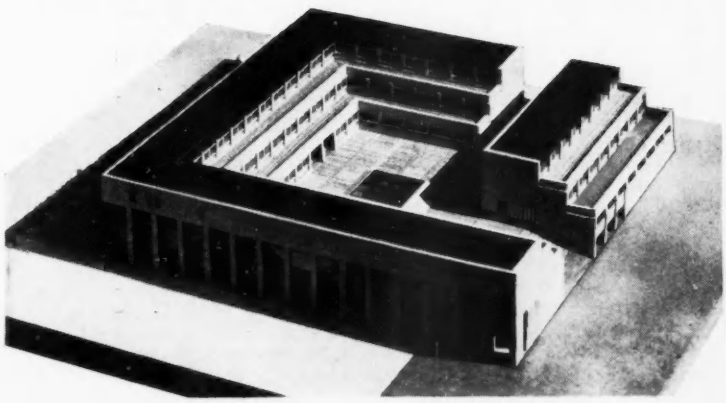
OXFORD, 1961

An article on the Oxford scene, by David Booth, AADipl, FRIBA, will appear shortly.



HOSTEL FOR CLARE COLLEGE: *David Roberts, architect (1958)*

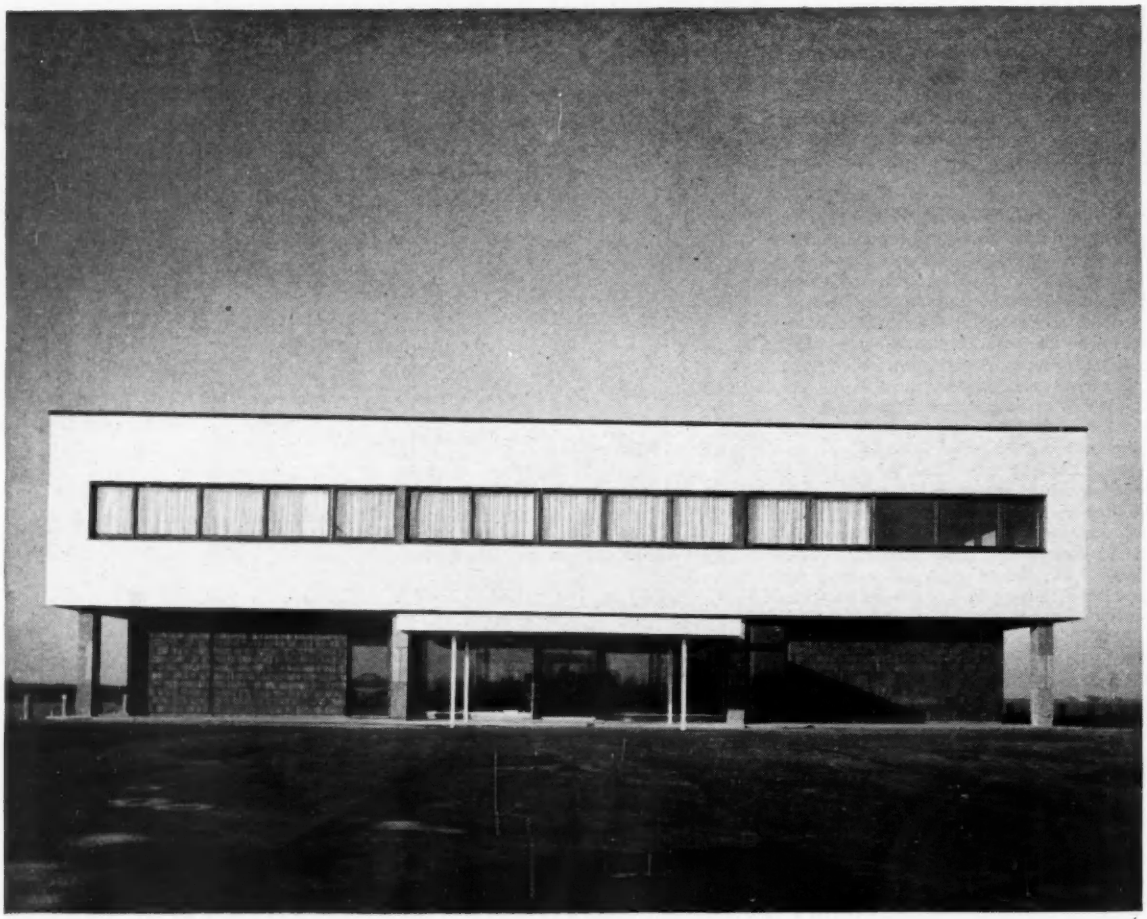
HOSTEL FOR KING'S COLLEGE, *on Central Hotel site. Architects' Co-partnership, architects. Below: Court for* GONVILLE AND CAIUS COLLEGE. *Sir Leslie Martin in association with Colin St. J. Wilson, architects*



Administration and Research Block

For Dow Agrochemical Works, Norfolk

FRY, DREW AND PARTNERS, architects
CONSTRUCTORS JOHN BROWN LTD., engineers and contractors

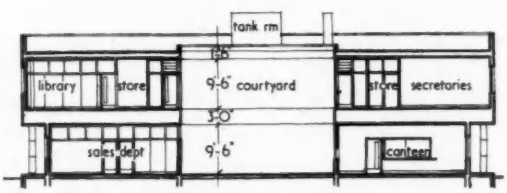


main frontage and entrance

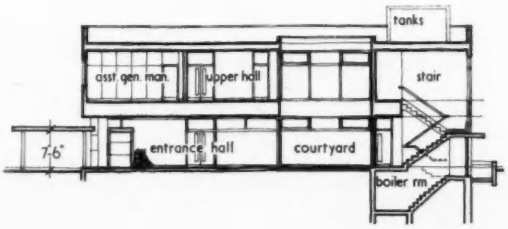
THE OFFICES are part of a new chemical works undergoing construction at King's Lynn, for Dow Agrochemicals Ltd. The ancient City of King's Lynn has been a backwater since the 18th century; its magnificent churches, medieval houses, and elegant Georgian Customs House quietly hold their place, undefiled by industrialism. However, construction of King's Lynn Docks and the great channel of the Bedford River into the Wash during the 19th century did create an industrial nucleus which has become the vehicle of a brisk continental traffic. To this nucleus a few modern industries have been added, of which this works for the production of agricultural chemicals is the largest and most recent.

The site is 88 acres of reclaimed land bordering on to the Bedford River. In view of the relationship of the development to King's Lynn and its historic architectural qualities, both architect and client desired to produce a building of comparative architectural merit. The offices have been sited prominently on the wide grass bank of the river.

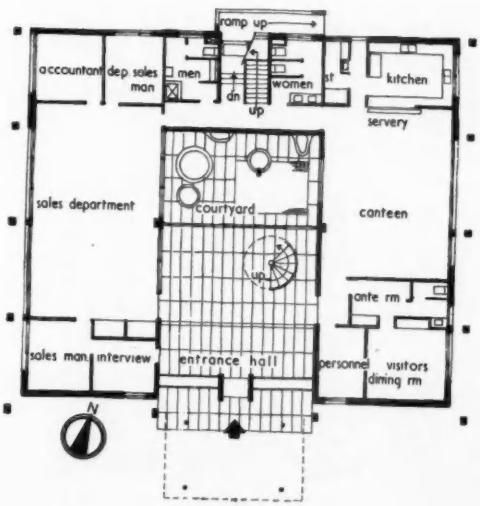
The plan of the building is a simple arrangement of offices round a central courtyard, satisfying the present needs of the Company, but allowing for future expansion. Architectural expression is straightforward and direct, ' relying on proportions and on the colour scheme of black and white that make all



SECTIONS, Scale: 1 in. = 32 ft.

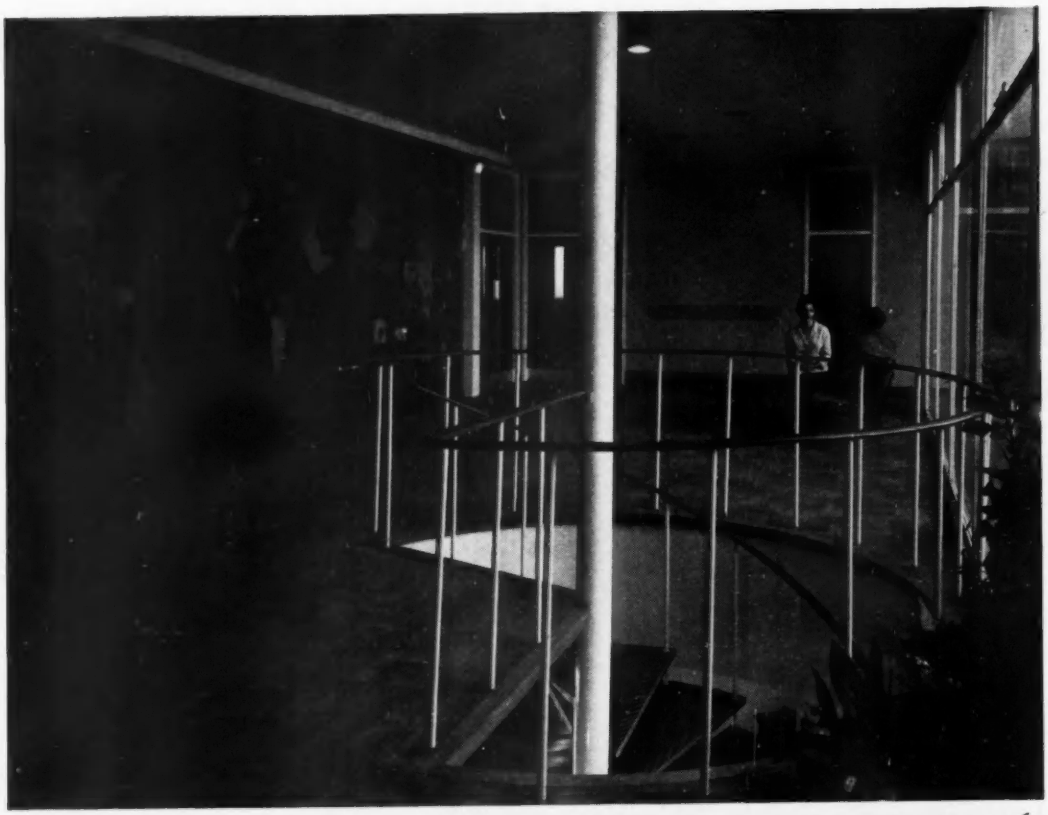


view from south



GROUND FLOOR
Scale :
1 in. = 32 ft.

FIRST FLOOR



Administration and Research Block

coastal buildings look distinguished, standing out against the long perspective of the landscape and the wide sweep of sky.'

The cost of the building is £70,000. Construction began in May, 1960, and the offices were completed and occupied in under five months.

It is a steel framed structure on mass concrete foundations, with a metal troughing roof insulated and finished in built up roofing material. Floors are 3 ft. deep for carrying services, and hung with acoustic tiles. The entrance hall ceiling is of beechwood strips. Externally the lower recessed storey is lined with Staffordshire brick tiles, while the overhanging upper storey is lined with white painted vertical boarding. Both storeys have double-glazed horizontally pivoted wood windows as a protection against the severe winter weather. Care has been taken to insulate all external surfaces.

The brick tiles are continued past the plate glazing of the entrance into the hall. A special character is created in the entrance hall by the combination of wide entrance glazing, two-level entrance hall and open spiral staircase, and the glazed wall of the internal garden court.

The ground floor is taken up on the left-hand side with a waiting room and the offices of the sales department, and on the right by the office of the public relations officer, the luncheon room for directors and the staff canteen and kitchen.

The wide spiral staircase leads to a waiting space overlooking the courtyard and containing a mural map measuring 9 ft. 6 in. by 30 ft., the work of Mr. Don Foster, ARCA. The map shows the worldwide activities of the parent Company and indicates to the staff the time prevailing at its chief offices abroad.

The right-hand side of the first floor is devoted to laboratories of chemistry and biology and the remaining offices are occupied by the managing director and his staff, conference room and library. Provision has been made for extension of corridors northwards.

sub-contractors & suppliers:

General structural work: Kyle Stewart (Contractors) Ltd.; *steelwork:* John Lysaght's Bristol Works Ltd.; Dawnays Ltd.; *structural concrete work:* Costain Concrete Co. Ltd.; *roof decking:* BAR Construction Co. Ltd.; D. Anderson & Sons Ltd.; *Windows: Timber:* J. Honour & Son Ltd.; *Metal:* Starkie Gardner Ltd.; *Electrical:* Eastern Electricity Board; Crompton Parkinson Ltd.; C. J. Brown Ltd.; and J. Statter & Co. Ltd.; *Spiral staircase:* S. W. Farmer Ltd.; *Kitchen equipment:* Falkirk Iron Co. Ltd.; *Air conditioning and space heating:* Andrew Air Conditioning Co. Ltd.; C. B. Jackson Ltd.; *Lagging:* Dicks Asbestos and Insulating Co. Ltd.; *Furnishings:* George Milligan Ltd.; *Movable partitions:* Tenon Contracts Ltd.; *Marble work:* Fennings Ltd.; *Sanitary ware:* Farrer Ltd.; *Cooling tower:* Head Wrightson Processes Ltd.; *Steam boiler:* Marshall Sons & Co. Ltd.; *Raw water storage and mild steel tanks:* John Booth & Sons (Bolton) Ltd.; *Water treatment plant:* W. Boby Ltd.; *Floors:* Edward Stuart & Co. Ltd.; *Terrazzo:* Malacarp Terrazzo Co. Ltd.; *Ceilings:* Horsbrugh & Co. Ltd.; *Light fittings:* Atlas Lighting Co. Ltd.; *Glass vessels and piping:* Q.V.F. Ltd.; *Chemical resisting lining to caustic scrubber:* Corrosion Proof Products. *Flagstaff:* Gray & Don; *Laboratory equipment:* Gallenkamp Ltd.

Top, crop protection laboratory. Centre, managing director's room. Walls are lined with plain grained timber panelling. Below, the main entrance and full-width glazing to the hall. Facing page, spiral staircase in the main entrance hall, rising to the waiting space at first floor. Full views are afforded at both levels into the garden courtyard beyond. The lower ceiling is lined with beechwood strips.

Library Extension, King's College, Newcastle

EASTON & ROBERTSON, CUSDIN, PRESTON AND SMITH, architects

FELIX J. SAMUELY & PARTNERS, structural engineers

STANLEY MILLER LTD., general contractors

exterior of the reference room and book stack

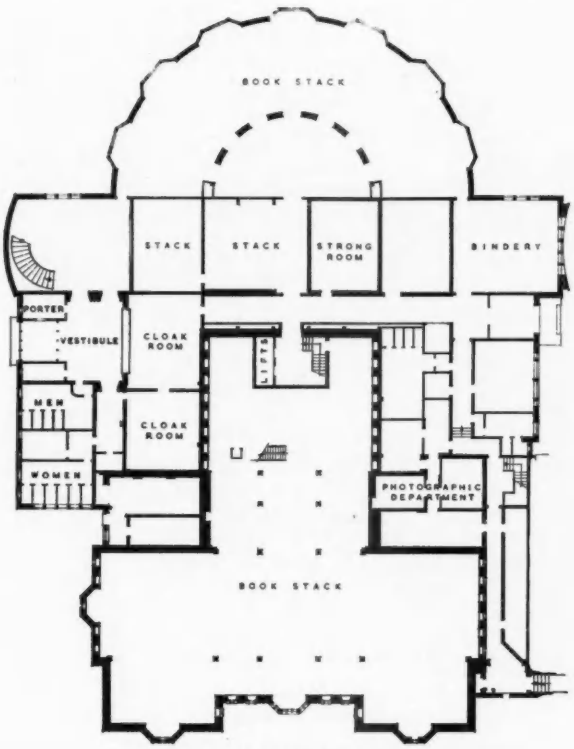
THIS EXTENSION to the Library for King's College, Newcastle-upon-Tyne, part of the University of Durham, has been built around three sides of the existing bookstack, leaving open light wells on the east and west sides of the old building. The new building has six floor levels in the central block and east wing, and five floors in the west wing. A three-storey semi-circular block projects from the north side of the six-storey central block. The floor area of the extension is approximately 60,000 sq. ft. and will provide accommodation for 560 readers and approximately 265,000 volumes.

The structure is a reinforced concrete frame with floors of prestressed concrete tee-beams. The external walls are of brick cavity construction with Ibstock multi-golden brown handmade facing bricks. The flat roofs are asphalt finished and the lift motor room is covered in copper.

Purpose made aluminium windows are used with Verde Oliva cills and in some cases with Verde Oliva surrounds and panels between windows. The large windows on the North elevation, including the bay windows of the semi-circular wing, have San Stefano marble linings and mullions. Three mosaic panels, each 5 ft. wide by 10 ft. high, designed and executed by Dorothy Annan, are a feature of the elevation of the semi-circular wing.

The main entrance is in the west wing, leading into a panelled vestibule. A counter in the vestibule gives access to the cloakroom equipped with hat and coat racks and lockers for brief-cases. The semi-circular staircase from ground to second floor is of reinforced concrete with a clear span from floor to floor. The staircase is finished with travertine treads and dark green terrazzo risers. The walls of the staircase are flush panelled in Lebanon cedar with walnut mouldings. The sculpture at the foot of the staircase is the work of Trevor Tennant, the sculptor. On the first floor in the central block is the entrance hall in which are positioned the inquiry desk, issue desk and subject and name catalogues. The columns in this area have San Stefano marble linings. The periodicals room occupies the west wing with a gallery over. Walls are lined with specially designed racks to house the periodicals.

The librarian and deputy librarian have their offices on the second floor. Bookcases and cupboard fittings are of beech and walnut. The academic staff reading room has cedar panelling on the south wall and large glazed screens



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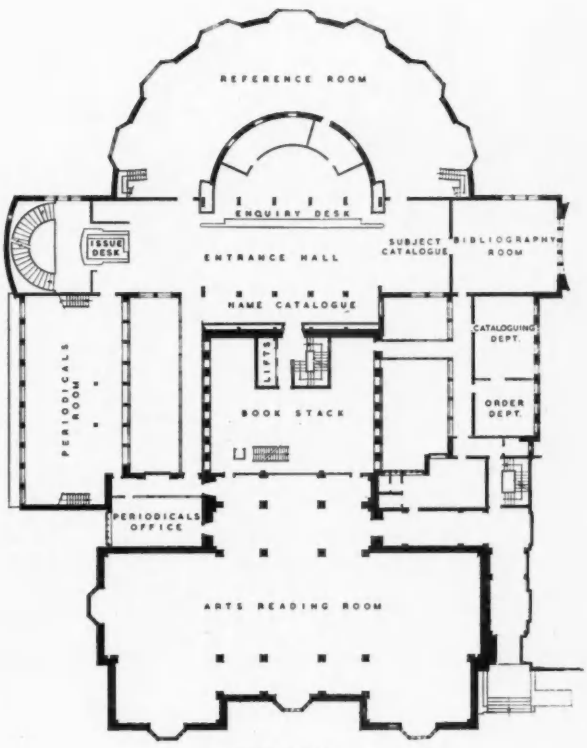
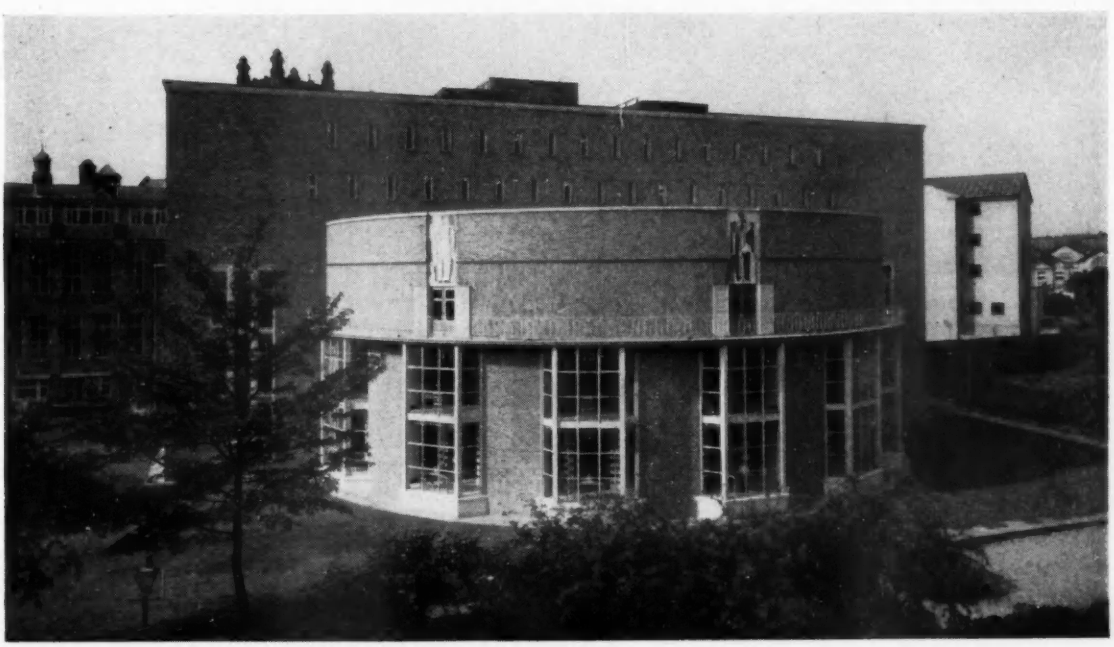
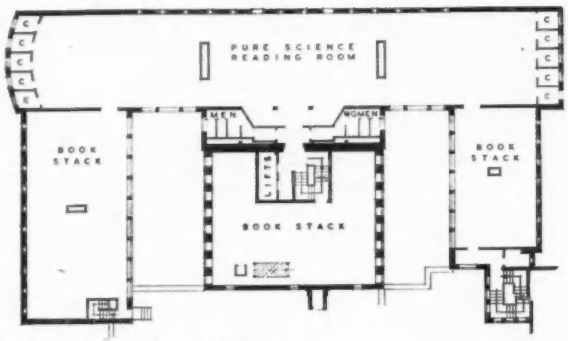


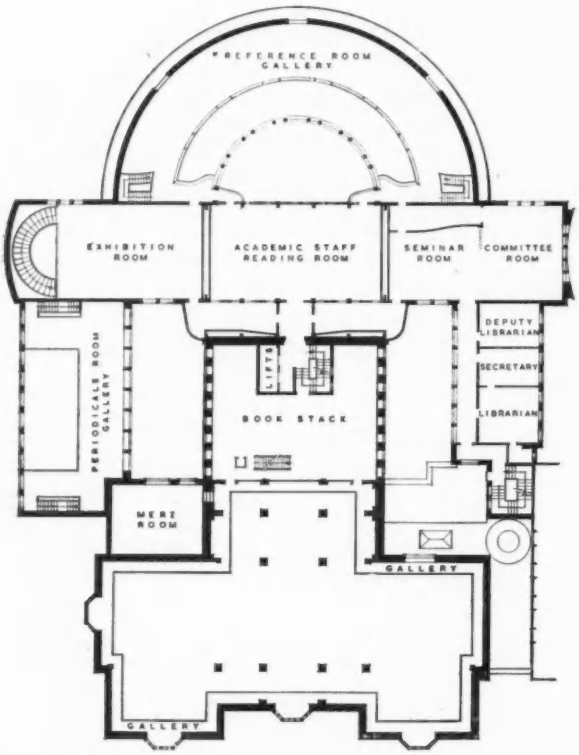
FIRST FLOOR

general view of the extension

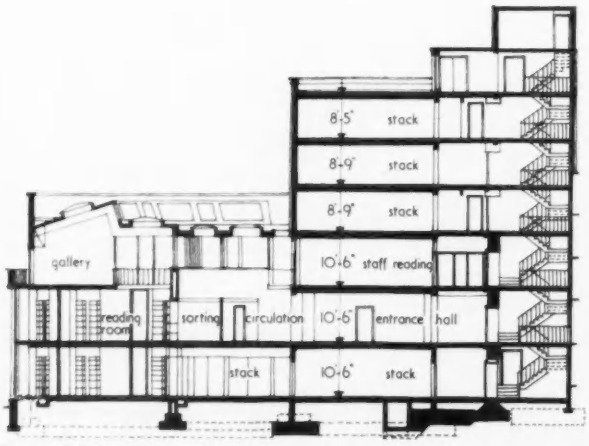




THIRD FLOOR (4TH & 5TH SIMILAR)



SECOND FLOOR



SECTION, Scale : 1 in. = 32 ft.

for the full length of the north side. On this floor also are galleries to the reference reading room.

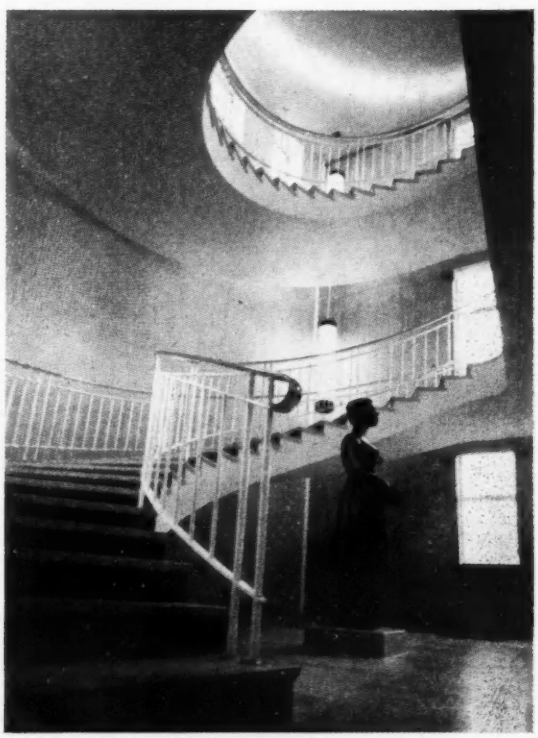
The three upper floors are stackrooms with individual reading tables on the external walls. Steel shelving is used in these bookstacks. On the third and fourth floors the central wing consists of large reading rooms with readers accommodated at tables for four. Ten study carrels are provided on each of the third, fourth and fifth floors, and one of these on each floor is specially soundproofed.

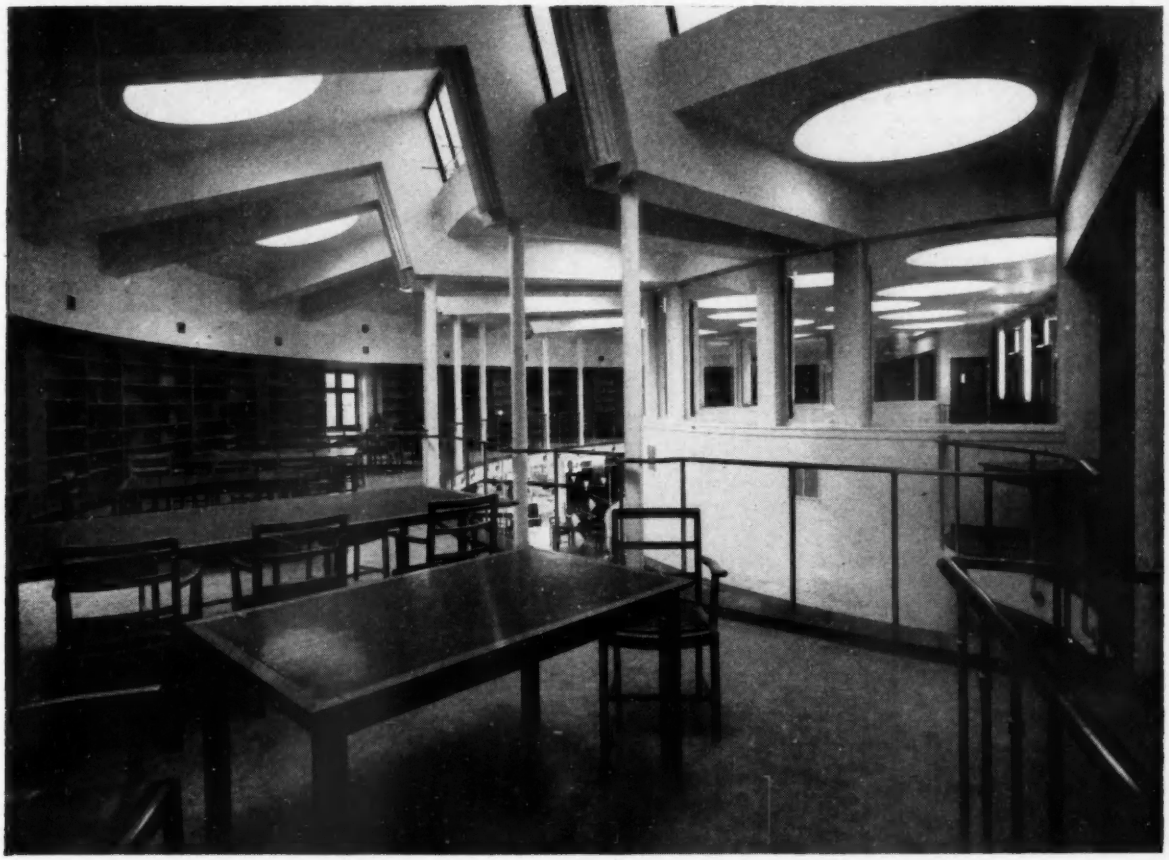
The semi-circular reference reading room and gallery have wooden bookcases and readers are seated at large tables with small tables in the bay windows. The roof over the semi-circular wing is of reinforced concrete construction with cranked beams on the line of radials to permit near-vertical patent glazing. The flat slab is perforated by circular glass dome lights of varying sizes.

The central staircase which serves the full height of the building and the shaft for the two lifts have been constructed within the old stack rooms. The staircases are finished in terrazzo. The internal walls generally are 9 in. or 4½ in. brick plastered. The flooring in the stack rooms and reading rooms is linoleum tiles. Hardwood blocks have been used in the administrative section, and the lavatories are tiled.

The building generally is heated by means of low pressure hot water circulated through embedded floor panels, in conjunction with a system of mechanical ventilation. The steam supply is obtained from the main boiler house serving the College. Mechanical supply and exhaust ventilation is provided for all stack rooms, reading rooms, seminars and certain staff rooms. The supply and exhaust plant, including filter and heater, are located on the sixth floor. Quantity surveyors: Gardiner and Theobald. Electrical consultants: Edward A. Pearce & Partners.

clear span staircase, entrance hall





cranked beam roof over reference room gallery

reference room

top and below, entrance hall, issue and inquiry desks

bookstack units

Library Extension, King's College, Newcastle

sub-contractors & suppliers:

Heating, ventilation & plumbing: G. N. Haden & Sons Ltd.; *electrical installation:* N. G. Bailey & Co. Ltd.; *painting & decoration:* M. Alexander & Sons; *sliding folding door:* Bolton Gate Co. Ltd.; *copper roofing:* Fredk. Braby & Co. Ltd.; *patent glazing:* The British Challenge Glazing Co.; *floor & wall tiling & w.c. partitions:* Commercial Marble & Tiles Ltd.; *aluminium windows:* The Crittall Manufacturing Co. Ltd.; *insulation:* Darlington Insulation Co. Ltd.; *glazing:* Elders Walker & Co. Ltd.; *asphalt roofing:* Faldo Asphalte Co. Ltd.; *Granwood flooring:* Granwood Flooring Co. Ltd.; *lift installation:* Hammond & Champness Ltd.; *balustrades & handrails:* Haskins Metalwork; *wood block flooring:* Hollis Bros. Ltd.; *glass rooflights:* T. & W. Ide Ltd.; *cold cathode lighting:* Ionlite Ltd.; *linoleum flooring:* N. Jack & Co.; *marble:* Walter W. Jenkins; *plastering:* Newman Bros. Ltd.; *power-operated door equipment:* G. D. Peters & Co. Ltd.; *waterproof roofing:* The Ruberoid Co. Ltd.; *suspended ceiling lathing:* S.G.B. Metal Lathing Division; *metal ductwork:* S. T. Taylor & Sons Ltd.; *venetian blinds:* John Wood & Sons Ltd.; *terrazzo:* Zanetti & Co. Ltd.; *lighting fittings:* Atlas Lighting Ltd.; *steel clothes lockers:* W. B. Bawn & Co. Ltd.; *paint:* British Paints Ltd.; *lighting fittings:* Courtney Pope (Electrical) Ltd.; *louvred grilles:* Richard Crittall Marine Ltd.; *turnstiles:* W. T. Ellison & Co. Ltd.; *lighting fittings:* Falk, Stadelmann & Co. Ltd.; *lighting fittings:* Frederick Thomas & Co. Ltd.; *door mats:* General Welfare of the Blind; *lighting fittings:* Hailwood & Ackroyd Ltd.; *Portland stone:* Jas. H. Harrison; *steel reinforcement:* Helical Bar & Engineering Co. Ltd.; *door gear:* E. Hill Aldam & Co. Ltd.; *Carda windows:* Holcon Ltd.; *lighting fittings:* Hume Atkins & Co. Ltd.; *facing bricks:* Ibstock Brick & Tile Co. Ltd.; *Glascrete rooflight:* J. A. King & Co. Ltd.; *signs and lettering:* The Lettering Centre; *light fittings:* Merchant Adventurers Ltd.; *cradle:* Palmers' Travelling Cradle & Scaffold Co. Ltd.; *ironmongery & cloakroom fittings:* N. F. Ramsay & Co. Ltd.; *lighting fittings:* S.L.R. Electric Ltd.; *flush doors:* Shapland & Petter Ltd.; *prestressed concrete units:* Stepney Cast Stone Co. Ltd.; *lighting fittings:* Troughton & Young (Lighting) Ltd.; *furniture & fittings:* D. Burkle & Son Ltd.; *book trolleys:* Libraco Ltd.; *steel bookstacks:* Luxfer Ltd.; *chairs:* H. Morris & Co. Ltd.; *card catalogue cabinets:* North of England School Furnishing Co. Ltd.

The RIBA Royal Gold Medallist, 1961

Lewis Mumford : A Great Humanist

The Queen (as announced in our last issue) has approved the nomination by the Royal Institute of British Architects of Professor Lewis Mumford, the eminent American critic and writer, as Royal Gold Medallist for Architecture, 1961. It is hoped that the presentation may be made on June 27 at the RIBA. A tribute to Professor Mumford, and some details of his career, now follow.

Professor Lewis Mumford

A Tribute

WHEN future historians are at last able to look back upon this most remarkable of centuries with a dispassionate eye, they should be able to make a better appraisal of the 20th-century man himself than we can today. For us, the complications of life in which man's own inventions are entangling him remain too new and too numerous to be seen clearly. And the jungle grows more rapidly than we can hack our way forward through its intricacies. So it will only be when the 20th-century's novelties have become commonplace, and its deplorable events detach themselves from its far-reaching aspirations, that our 20th-century man will be properly seen in the midst. What sort of a life is he really aiming to lead, and what sort of a world is he aspiring to live it in?

We should be grateful that the century has not been entirely without its seers, to whom the future will be able to turn for an answer. Indeed the future will probably have depended upon them for its very existence—and a high place among their select band must surely be occupied by the American, Lewis Mumford. He has not been a politician or a revolutionary in the accepted sense of either term. Nor has he actually been a town planner, nor an architect, in the way that we understand those words. But during these years of the great rebuilding he has probably had as eminent an influence on town planning as any man on either side of the Atlantic. As sociologist, as professor, but above all as author, he has explored 'what the modern world may hold for mankind once men of good will have learned to subdue the barbarous mechanisms and the mechanised barbarisms that now threaten the very existence of civilisation.' He wrote these words well before the atom bomb was dropped. His 'Technics and Civilisation' was published in 1934 and 'The Culture of Cities' in 1938. Together with his wartime 'Conditions of Man' they form the trilogy upon which his fame chiefly rests; and one has only to read these works today to realise how truly subsequent developments have proved him right.

Mumford's chief intellectual debt is to Patrick Geddes, as he acknowledges; but where the modern reader now finds Geddes vague or woolly, Mumford precisely at those points develops penetrating and specific precepts. His principles of urban order—though one should read the whole of his works to appreciate them fully—are the finest summation of their subject yet available. And it is because the work of town planning, and of architecture in pursuit of town planning, ranges so widely after different objectives, often chimerical, that town planners and architects venerate Mumford, who always brings them back to bedrock. The importance of the family, the nature and purpose of the city, the potentialities of life for modern man—all are clarified by his rationale. 'The culture of cities is ultimately the culture of life in its higher social manifestations.' Mumford becomes the outstanding mediator between the practice of town planning and the man.

Fulfilment of such a rôle has rightly brought with it many honours, both American and British, over a long space of years. The Gold Medal of the Town Planning Institute in 1958 was only one of these: the Howard Memorial Medal of the Town and Country Planning Association in 1946 another. The latest award, whose conferment upon Lewis Mumford is now announced, is a tribute that British architects will gladly pay, for Britain could very well claim that it has learnt even more than his native country from this great humanist.

Professor Mumford's Career

LEWIS MUMFORD, the eminent American critic and writer, was born in Flushing, Long Island, on October 19, 1895. After graduating from Stuyvesant High School he studied at the College of the City of New York, Columbia University, and the New School for Social Research. He was Professor of Humanities at Stanford University from 1942-44, Visiting Professor of city and regional planning at the University of Pennsylvania 1951-56, 1959-61, and Visiting Bemis Professor at Massachussetts Institute of Technology 1957-1960. He was a member of the Board of Higher Education, New York City, from 1935-37 and later served on the American Commission on Teacher Education. He is an Honorary Member of the International Housing and Town Planning Federation, American Institute of Architects, the Town Planning Institute of Great Britain, the American Institute of Planning, and the Town Planning Institute of Canada. He is also an Hon. Associate of the RIBA.

He was a correspondent and disciple of the late Sir Patrick Geddes and has taken a great interest in recent town planning in this country as well as in America. Though a 'generalist' whose books cover a wide range, he has an international reputation as an authority on cities and through his many books—the best known being 'Technics and Civilisation' and 'The Culture of Cities'—has exerted a profound influence on present day trends in town planning, housing, and the social arts. His new book 'The City in History—its Origins, its Transformations, and its Prospects' is being published in 1961. In all his writings he has advocated a policy of regional rather than metropolitan organisation for building new towns and renewing older ones. In 1957 he was awarded the Town Planning Institute Royal Gold Medal.

Book Review

Architectural Draughtsmanship

ARCHITECTURAL DRAUGHTSMANSHIP. By A. Stanley Barnes and P. E. Cleator. (London: Leonard Hill [Books] Ltd.) Price 25s. net.

IN TEN WELL-WRITTEN CHAPTERS this book provides a clear and concise survey of the whole subject of architectural draughtsmanship. In addition to the fully illustrated purely technical exposition, covering drawing instruments and equipment, plans, tracings and prints, representation of materials, architectural geometry, introduction to perspective, elements of sciagraphy, forms of lettering, and freehand drawing, it includes a good deal of information about the profession and its background, and the examination regulations of the RIBA.

A feature of special interest is a 'historical supplement' consisting of over fifty pages of plates showing examples of the work of famous architects and draughtsmen throughout the ages, including Canaletto, Rembrandt, Perugino, Leonardo da Vinci, Villard de Honnecourt, Inigo Jones, Wren, Piranesi, A. W. N. Pugin, Sir Charles Barry, Sir Gilbert Scott, G. E. Street, Norman Shaw, Philip Webb, C. E. Mallows, Aston Webb, C. F. A. Voysey, Cyril Farey, Sir Basil Spence, J. D. M. Harvey, and others, among whom we are pleased to find two artists whose careers were closely associated with 'The Builder,' namely, H. W. Brewer, described as 'The king of architectural draughtsmen,' and T. Raffles Davison. An excellent book which, though intended primarily for the student, should have a much wider appeal.

G. J. HOWLING.

Showrooms, St. Albans

For Eastern Electricity Board

BRYAN & NORMAN WESTWOOD & PARTNERS, architects
HARRIS & SHELDON LTD., shopfitting contractors

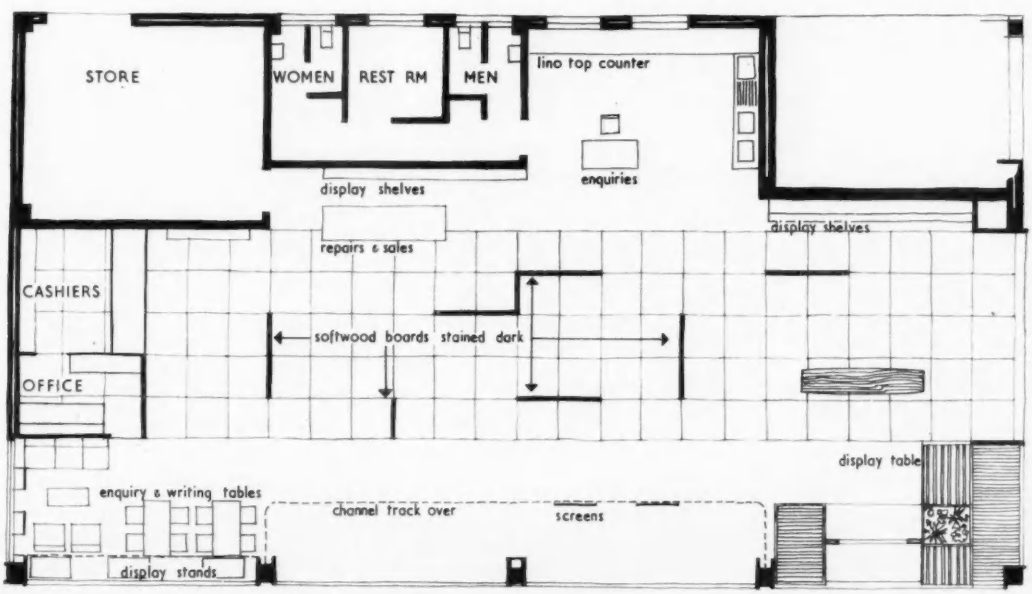
rear window and flank display windows

main entrance, and High Street frontage on return

IN PREPARING THE DESIGN for the new showrooms careful note was taken of the various approaches to the site, bearing in mind its relation to other buildings under the development plan. However, it seemed clear that the window to the High Street would permanently have the most importance. The general conception for the shopfront was to open up a view of the interior rather than to use window enclosures. In order that the best possible view could be obtained, a curved non-reflecting window has been used on the High Street frontage, notwithstanding certain disadvantages which this type of window has. The flank windows are arranged with screens and curtains to form an interesting and colourful setting for goods of various sizes. The small window at the rear has been differently treated as space here is limited, and veneered wood and bronze have been used to give a special setting for small objects.

The main internal requirement was flexibility. A special ceiling divided into panels has been used, which can be used for lighting or for suspended fittings and can easily be varied. At the intersections of the ceiling grid small vertical members may be inserted to give support to screens for sub-dividing the floor for various types of display. The floor itself has a hard tiled finish in two colours which can be softened by using rugs,

cashier's desk, and panelled grid ceiling



GROUND FLOOR

Scale: 1 in. = 12 ft.

and the screens themselves have been constructed in rough wood or cane or smooth slats. It was felt that robust kinds of material should be used as a foil for the smooth mechanical precision of most of the equipment displayed. In general it is intended that the screens shall be so arranged that a wide view of the showroom is clearly attainable. The cash counter is made interesting by a decorative photomontage of a view of St. Albans drawn many years ago.

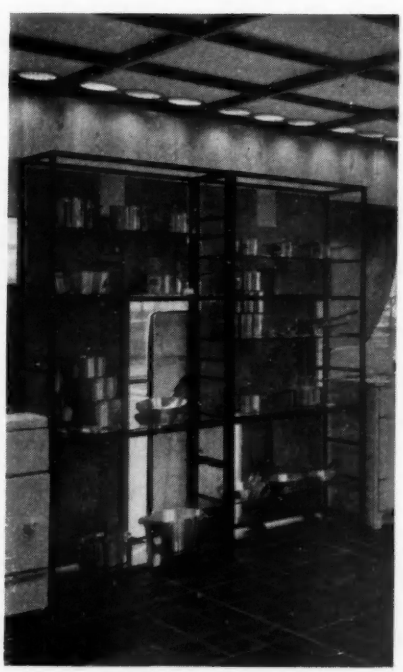
A large proportion of the equipment is bought on hire purchase, and a recess is provided with tables and chairs and pleasant lighting so that the various documents can be completed by purchasers in a comfortable way.

sub-contractors & suppliers:

Chairs, tables & carpets: Conran Contracts; *ironmongery:* A. Roberts; *Flexigrid ceiling:* Courtney Pope; *floor tiles:* supplied by Langley (London) Ltd., fixed by Camden Tile & Mosaic Co.; *curtains:* Primavera; *pendant lighting fittings:* Atlas Lighting; *fascia signs:* Pearce Signs Ltd.; *venetian blinds:* Luxaflex; *electrical installation:* Eastern Electricity Board; *photograph-mural:* H. G. Dorrett Ltd.

Above, recess containing inquiry desks and chairs for conducting hire purchase transactions. Below left, at intersections of the ceiling grid small vertical members can be inserted to support screens for special kinds of display. Below right, metal units with glass shelving for displaying kitchenware. A hard tile flooring in two tones is used, with rugs

Showrooms, St. Albans



More Everyday Things

BY ARTHUR W. KENYON, CBE, FRIBA

25. New Year Resolutions

PERHAPS you have already made—perhaps even broken—your New Year resolutions. Perhaps you decided not to make any, knowing your limitations. Just in case anyone finds himself in need of suggestions, here are a few selections from my favourite list.

CLIENTS: Since you pay the piper, by all means call the tune, but please resolve thereafter to leave the piper alone to play it in his own key.

ARCHITECTS: A good firm resolve from you please to have all the drawings ready before the builder has even thought of them. You will reap handsome dividends from this before the year is out.

BUILDERS: Remember that it rains in this country most months of the year. Resolve to remember this every time you sign a building contract and when you estimate the length of time you will require to carry it out. Then please remember not to talk of weather every time you are called upon to explain delays. Better still, of course, if you could make one really bumper resolution to have no delays at all.

BRICKLAYERS: Those joints. What about resolving to flush up as you go along, even though the building construction books do not tell you this? It makes a stronger job, and after all you are the man responsible. Could you also tack on a rider to remember that perpends which carry up vertically look a good deal better than those that wander about all over the place?

CARPENTERS AND JOINERS: A hundred resolutions at least spring to mind here. What about a nice simple one that should be easy to keep? Just this. Resolve to put all the screws in fittings that the designers intended them to have; that is what the holes are for, so it should not be difficult to remember. And put tallow in the kit bag for the screws; they come out so much more easily and what is more they don't rust.

PLUMBERS: Try to keep the cold water

on the same side of all fittings: it makes life so much easier for the eventual users.

PLASTERERS: Could you vow to remember that those great spaces of wall which you are covering will be seen in all angles of light? It is possible to get them smooth. See what you can do in 1961 to earn your title of craftsman.

ELECTRICIANS: The poor electricians need all our sympathy. They can only resolve to endure with patience the trials bequeathed to them by the backroom boys of their trade who design the fittings which they are required to fix. But if you could also add a small resolve not to pull three wires through a tube intended for two, there are many to reap the benefits of your New Year vows.

PAINTERS: I would offer my suggested resolution here for sympathetic consideration by every member of the trade. Just this: resolve to paint only those parts of the building scheduled for painting, but if you should inadvertently add a splash or two elsewhere, then remove the evidence straight away. It takes an awful lot of getting rid of when you have gone away.

PAPERHANGERS: Remember the string across the paste bucket. It helps to keep the brush clean.

LABOURERS: For my good friends, the labourers, whose job well done surpasses all the rest, I can think of no better resolve than to watch the mix and see that it is right and ready at the right time.

OFFICE WORKERS: To the ones who don't pay the electricity account, I suggest a resolve to turn off the switches when the light and heat are no longer required; and to the ones who do pay the bills, leave everything on at your leisure.

To all my colleagues in the building trade, I wish a very happy and prosperous New Year. . . . My own resolve? Of course, always to let the Editor have my copy on time.

Books Received

*** *Books noted in these columns may be obtained on application to the Book Dept., 'The Builder,' 4 Catherine-street, Aldwych, WC2. Cash (to include postage on books to the value of* 10*s.*, 9*d.*; *over* 10*s.*, 1*s.* 6*d.*) *should accompany the order.*

SURVEY OF LONDON, VOLS 29 & 30. THE PARISH OF ST. JAMES, WESTMINSTER, PART 1 (LCC). (London: The Athlone Press.) Price 168s.

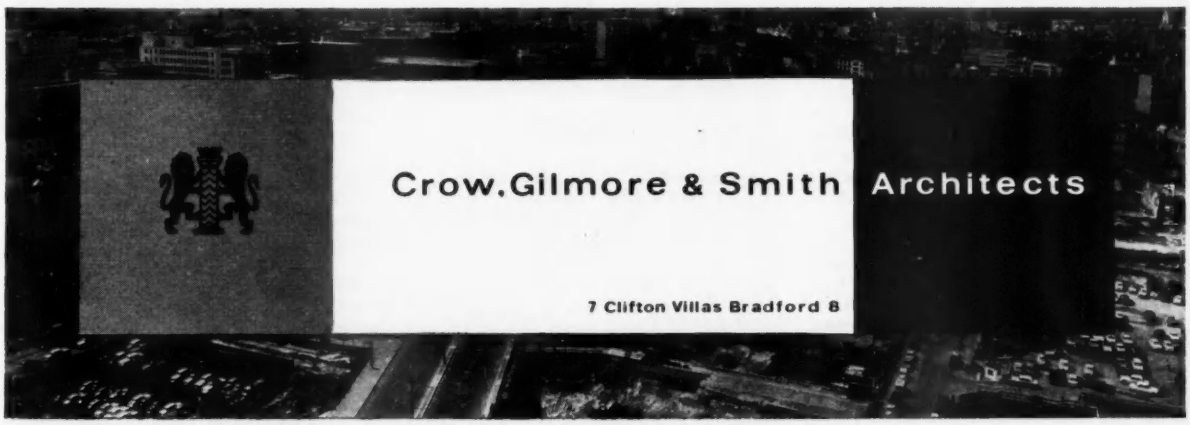
THE CONSTRUCTION OF GOTHIC CATHEDRALS. By Professor John Fitchen. (London: Oxford University Press). Price 63s.

MODERNISING YOUR HOME. By John Anderson. (London: Odhams Press Ltd.) Price 21s. (Publication date, February 20, 1961.)

STORY OF THE SAW. By P. d'A. Jones and E. N. Simons. (London: Newman Neame Ltd.) Price 21s.

THE CABINET MAKER DIRECTORY. (London: Benn Bros. Ltd.) Price 62s.

NEW RIBA STANDARD SIGNBOARDS: *The council of the RIBA has now approved two new standard signboards for use by architects on their sites. The larger board measures 8 ft. by 2 ft., the smaller 4 ft. by 1 ft., and both have grey, white and black panels, as shown on our illustration, reproduced by courtesy of the Editor of the 'RIBA Journal.' Orders can now be placed for the new boards and a list of manufacturers with prices can be obtained from the RIBA. All standard boards must in future be obtained through approved manufacturers in order to avoid discrepancies in layout and typography*



Architecture and the Return of Historicism

Professor Nikolaus Pevsner's Paper to the RIBA

A paper on 'Modern Architecture and the Historian or the Return of Historicism' was given by Professor Nikolaus Pevsner, CBE, PhD, MA, FSA, at a meeting of the Royal Institute of British Architects, held at 66 Portland-place, W1, on January 10 with the President, Sir William Holford, in the chair. We take the following extracts from the speaker's remarks and the subsequent discussion.

PROFESSOR PEVSNER said: The relation between the architectural historian and the contemporary architect has changed fundamentally in the 20th century. In the 19th century, the architect, with a few notable exceptions, was the architectural historian. As a historian, he would go and visit buildings of the past, draw them, measure them, describe them and date them, and he would then go home, turn architect, and build them in either inspired imitation or in a free version of the same data. But when, at the end of the 19th and the beginning of the 20th century, there arose a generation of giants, who created a new style of architecture independent of the past, and one thought one had a right to assume that historicism was at an end, the situation changed. The historian did his job, the architect did his job and while the personal relations between the two might have remained warm, it was bound to be no longer the same relation.

My principal job tonight is to draw attention to what I regard as an alarming recent phenomenon, which is the one that I chose to call 'the return of historicism.' This is, in my opinion, one aspect of a deeper change and, again, a change which represents to me one of the least attractive developments of recent architecture.

The change, generally speaking, is that from the old principle of form following function, in the sense that a building must first of all function well and should have nothing on its exterior to reduce the well-functioning—or, if I put it the other way round, that the beauties of exteriors of buildings and, for that matter, of their interior spaces as well, must be developed subsequent to the assurance of their well-functioning. Against that, there is this new tendency towards exteriors which are created not necessarily at the expense of function, although that is very often true too, but certainly at least developed towards an expression of exteriors which does not convey a sense of confidence in their well-functioning.

I would say that the return of historicism is one aspect of this change. Historicism is the trend to believe in the power of history to such a degree as to choke original action and replace it by action which is inspired by period precedent.

The Basic Cause

Why has this return to historicism begun to take place? I would say this, to put it very elementarily, that when the really original people in architecture start doing funny turns, then the less original people will, on the one hand, imitate the funny turns and, on the other hand, they will turn to places where they can find similar things in the past, where the never-before-imitated styles are the most attractive. These styles we have seen imitated on the slides are never-before-imitated styles which have yet happened to harmonise with this particular aspect of the last few years.

But the fundamental matter to explain this new historicism remains the fact that a change has taken place which I would trace back to its beginnings in Brazil in 1943 and 1944. These are the earliest buildings which are emphatically no longer connected with the so-called international style and they are buildings that have force, that have power, that have a great deal of originality but which are, emphatically, anti-rational.

Why did that happen? It is very simple to say 'boredom.' What I mean by that is, of course, the revolt against the uniformity and rigidity and exactingness of the style of the 1930s, or, to quote Wordsworth on this 'the degrading thirst after outrageous stimulation.' This change which has been commented on quite a lot has been called 'neo-sculptural,' 'neo-plastic,' 'neo-formalist,' 'neo-expressionism.' All this is true, and I would still say basically that the most important thing about it is the turn away from rationalism.

Discussion

SIR JOHN SUMMERSON, CBE, ARIBA: I find it hard to see why there should not be all these quaint eccentric departures which Professor Pevsner mentioned. It may be silly, but it is not wrong. I do not think it is always silly.

If I may venture a prophecy, I do not think that architectural style is going to be a serious issue again for a very long time. The serious issues will be, I suppose, on the technological level and the administrative and legislative levels. The bulk of architectural output will soon be no more a question of art than a refrigerator is a question of art and, of course, no less. Meanwhile, there is art-worry. But art-worry will be localised and eventually disappear. Have we not already an Institute for Constant Art-worry (ICA for short), whose therapeutic value may prove enormous?

DR. REYNER BANHAM: Historicism is a sign of revolt, yes; I would certainly agree with Professor Pevsner and Sir John Summerson about this, but what is it a revolt against? Speaking to some of the more 'revolting' of my generation, it is a revolt against the rigidity and excessive order of the architecture of the thirties which is, I think, a revolt against the accommodating, the neo-accommodating architecture of the immediate post-war.

Nevertheless, reflecting on the immediate post-war situation which was brought back to my mind by Professor Pevsner's slides of neo-accommodating architecture tonight, I began to see possibly what had happened. What will happen with students when what they see in their history lectures is stronger and tougher stuff than they get taught in their studio instruction? What happens when practising masters of today see that the slides they show from their history are '80 per cent proof?' I suppose they can lock the cupboard and say 'You must not have any more history, it is not good for you,' or they can add water until the stuff is indistinguishable from anything they get elsewhere. The responsibility is still there. It lies not, I think, with the historian but with the practising architect or designer who is also a teacher. He must provide stronger leadership than the historian can.

Appearance and Function

DR. HELEN ROSEMAN: A question I would like to ask is this: Is not the phenomenon we have seen, in fact, paralleled by the 'angry young men' who strongly react to their environment and somehow feel that they have got to be robust and unconventional. Are we not here confronted with a far wider phenomenon than one which is only architectural and which, I think, is cultural in a much more general sense?

MR. DONALD MCMORRAN, ARA, FRIBA: I happen at the moment to be in an extreme form or art-worry, and I cannot say what a great inspiration and encouragement this evening has been to me.

This is the point I would like to put to Professor Pevsner. Until about 100 years ago, all forms of architecture were disciplined or controlled by the facts of construction, and the facts of construction were that nearly everything was in compression and that was a discipline, and out of that discipline came the various architectural forms we all know. The introduction of steel altered that situation. Steel introduced the element of tension and it was used originally in very beautiful engineering forms such as those of a suspension bridge.

But as steel became to be used more and more in ordinary building, you had it used both in compression and tension, so that, from that time, you had got steel hidden in the building doing work of all kinds, both tensile and compressive, and the effect on the mind of the architect was chaotic.

In this country, by law and by the weather, we have to protect steel by some sort of covering. I would like to suggest that we give thought to this point, that what matters is what is seen. If we protect steel with concrete, and then we protect the concrete with stone because concrete weathers badly, as soon as we introduced those proved materials, such as stone and brick, then we ought to consider whether what is seen ought not to master the situation,

and that what is hidden behind should be thought of only as a means to an end.

MR. W. A. ALLEN, ARIBA: I would have thought the place where we are failing today, and the place where the challenges really lie, if the schools would only face up to it, is in making things a great deal better than they have been in recent times. The chaps who faced these problems 40, 50, 60 years ago, had very tough things to deal with and they had a great many odd failures on the way; they could not solve all the problems simultaneously. But one of the great failures was to be really sensitive. Much of the work is crude, rough, vigorous, tough, but it is insensitive. It is insensitive to what I am sure are the deep-seated human requirements of sensitivity: sensitivity in many ways—sensitivity to light and space and shape and colour; to acoustic environment, aural sensitivity, sensitivity to beauty and to refinements of various kinds.

This calls for a new level of approach in the schools, and I am not sure that our schools are capable of it at the present time.

The Matter of Class

PROFESSOR ROBERT MATTHEW, CBE, FRIBA: We are indebted to Professor Pevsner for showing us his kaleidoscope of some of the things that are happening today, but these are only some of the things. We have got class. How does class fit into this picture? The architect of the present day, in this country at any rate, has to be very firmly within his social context. I wonder if the kind of class outlook, which is of the whole group working firmly within a social zone, is not a steady influence which may well persist throughout this strange time of very quick change? I would say that one of the tasks of schools is to put the young architect within that social context.

PROFESSOR PEVSNER: The only thing that I can try to correct here is that which baffled me most is not so much the silence of the young as that I seem to have conveyed the impression of chaos —kaleidoscope, it was called. That is not all that I intended. The prospect of the whole situation today does not look to me chaotic. On the contrary, I tried, I thought, to put across the fact that we are faced here with a new style of mid-20th century, which is different from the style to which I belong and which I was several times tempted to criticise, of which I tried to show one particular aspect.

As the New Year begins, something of the splendour of Sir Basil Spence's design for the new Coventry Cathedral is already apparent. The walls and roof of the Cathedral are complete and the internal canopy, on which work in progress is shown in the photograph, almost so. At the present time also, the columns for the porch roof slab are being raised and glass for two of the full-height stained glass windows is being fitted. The main contractors are John Laing & Son Ltd.

Redevelopment in Guildford

Architect Answers Local M.P.'s Criticism

SOME months ago MR. JOHN C. HASKELL, ARIBA, a local architect and Rome Scholar, challenged some highly critical remarks by Guildford's MP SIR RICHARD NUGENT, about one of the town's newest and largest buildings, Bridge House. On January 11, Sir Richard and Mr. Haskell appeared together with MR. R. M. HARDY, the Corporation's town planning committee chairman, in a discussion, arranged by the Guildford Society, on 'New Buildings.' The Mayor, ALD. E. JONES, was in the chair.

SIR RICHARD held on strongly to his view that Bridge House was a 'dull square box' which failed as modern architecture, declaring that it was heavy and 'sits there like a layer cake which has failed to rise.' He was, however, not critical of modern architecture as a whole. With modern materials, he said, it was possible to produce a light, floating-shape effect which caught the eye. It fell to us in our time, Sir Richard went on, to make a great new development in our towns.

'We must see in this redevelopment,' said Sir Richard, 'that we really do at last secure some worthwhile amenity in our towns and cities; something that is pleasant to live with; architecture that is enjoyable, interesting and inspiring, and it can be done.' While Guildford High-street was interesting and exciting, Woodbridge-road, he said, 'gives you a pain all over—even more severe than Bridge House.'

Sir Richard said he was sure it was essential to get a big enough area to redevelop as a whole so that buildings could harmonise. The central area redevelopment scheme proposed for Guildford was, he thought, the right thing.

MR. HASKELL said that the trouble facing architects was that they could not experiment and say, 'We shall put up a new building here and if it is, in fact, a blot and a mistake we will take it down. They had to estimate the building's value before it was put up. Unfortunately, very ugly buildings seemed to endure for ever. Looking around the centre of Guildford where 'the jackals of the chain stores and multiple shops had devoured their prey,' one saw plenty of ugly buildings which seemed to continue.

He felt more positive measures should be taken to see that the centre of Guildford was regarded as a particularly valuable historic zone. The intrusion of multiple stores was something which must be controlled more vigorously.

MR. HARDY thought that one of the tragedies of today was that we could not set-off buildings in the way they should be set-off. In the main a piece of land was taken and filled solid with building. The higher buildings went up, the more attention should be directed to maintaining openings between those buildings. 'I think,' he said, 'an air of spaciousness can be achieved if developers are prepared to sacrifice a piece of the economic advantage they hope to get from the proposed development.'

In his reply, SIR RICHARD NUGENT said it would be ideal to preserve the High-street as a shopping precinct, but the High-street was an enormously valuable shopping area and, therefore, whoever was taking decisions about traffic must take good care not to interfere with the shopping value and the interests of the shopping area.

MR. HASKELL thought it was not only desirable but absolutely essential to cut out traffic from the centre of Guildford.

'On Being a Good Building Client'

Talk to the Rotary Club of London

The President, Director and Secretary of the London Master Builders' Association were among the guests who accepted invitations from the Rotary Club of London on Wednesday last in the Connaught Rooms, when Mr. Ian M. Leslie, OBE, JP, Editor of 'The Builder' Newspaper, addressed the Club 'On Being a Good Building Client.' Mr. H. Vivian Maltby, BSc, President of the Club, was in the chair. Following are extracts from the address:

'THERE IS NOT A SINGLE PERSON in this room, in all probability, who has not at some time or another engaged in a building enterprise of some kind. This fact—that you are the client who commissions the work and pays for it—makes you a part, and an important part, of the building industry and places a considerable responsibility on you.' I would like briefly to tell you what that responsibility means.

'Putting up any building is a joint enterprise between those who need a building, those who design and cost a building, and those who put it up on the ground. It is you, who are building owners, who carry the heaviest responsibility: for it is you who initially must select the professional advisers who will plan this building for you.

Choosing an Architect

'Choosing your architect is a crucial step, for not only is he the man who designs your building and controls the building work, but he acts in a quasi-judicial way as your agent in the carrying out of the contract. This is a protection of yourself and your interests that you surrender should you fall for the fair-sounding blandishments of the package-dealer—by which I mean the man who quotes you an all-in price for the erection of a stipulated square-footage of floor space. Yet I am always surprised at the casual way in which so many clients select their architect—because he plays a good game of golf, or is knowledgeable about claret or just because he seems a good fellow. By all means back your judgment—but assemble some facts on which to base that judgment.

'You have now selected your architect. Next comes the most difficult part, to establish a complete understanding, for without this the architect cannot advise you on the issues involved in putting up your building. If you have chosen your architect well, there should be no real difficulty in establishing a good relationship, by which I mean an honest relationship. The essential job facing you both is to get the amount of accommodation you want for the money you can afford. In this, the average building owner is not usually at his most helpful. A woman descending on the January bargain sales has nothing on the building owner who—though he would not expect to buy 20 cigarettes or a Jaguar car below market price—thinks that he has a prescriptive right to get a complicated 'one-off' structure which is intended to last for, say, fifty years, at a cut-price. This attitude, and it often exists, can sour the client-architect-builder relationship from the start.

'Listen to your architect's advice! Setting aside the question of architectural design, the knotty point is what form of contract is to be employed. There are many forms of contract, but there is no doubt that the one most popular among unknowledgeable building owners is the "free-for-all"—the one in which the job is thrown open to any and every builder, irrespective of his skill and merit. This, in my view, is the one certain road to an unhappy contract and, most likely, to an unsatisfactory building. To begin with, many builders of standing just will not enter the lists in competition with firms of lower technical and, possibly, ethical standards, and the building owner who insists on this form of going to tender may well find himself landed with a contractor who quotes a low price but reckons to make his profit out of scamped work and from extras.'

The speaker then briefly described alternative forms of placing a contract—competitive tendering from a selected list; the negotiated contract; and cost plus fee—and continued: 'For myself, I would like to see more use made of both these last two systems. But whatever their merits, I should wish to see retained in some measure the principle of open competitive tendering, if only to give the opportunity to up-and-coming firms to test themselves in the highest company.

The Client's Part in the Project

'Some bright individual once described the client's part in a building project as being much the same as a father's. The process is very similar. There are certain preliminaries, which can be enjoyable; there follows a long wait in which his presence is hardly necessary; finally there is an end-product whose appearance, and even whose function, is quite imponderable. The only certain factors are that it will be costly and that maintenance may be expensive.

'This simile (continued Mr. Leslie) is not in fact an exact one. If he does his job properly at the beginning, the building client can, with reasonable certainty, determine the appearance, the usefulness and the price of the building which he is fathering. But there are two ways in which he can materially assist progress after the contract is let. Students of the Sherlock Holmes canon will remember the Master's conversation with Inspector Gregory in the little problem of the disappearance of the racehorse "Silver Blaze"—the conversation that had to do with the curious incident of the dog which did nothing in the night time. It would be a splendid thing if building clients would follow the dog's example and do nothing during the period which succeeds the signing of a contract—but especially to resist the understandable desire to see building started the same day.

'Please, as building owners, understand that a great deal of preparatory work still has to be done after the contract is signed and before actual building can commence. It is the speed in finishing building operations, not in beginning them, that is the important thing.

'The second way in which you can help towards an efficient and economic result is by making up your mind early about requirements and resisting a natural inclination to interfere. Changes of plan may be necessary, but building owners should be aware that such changes may be both costly and delaying.

The Question of Fees

'A word about fees. No part of the building process is harder for the average client to understand and accept than the method of charging fees. On a multi-storey building a building owner will find that he is committed to paying fees, not only to his architect, but fees to the quantity surveyor, structural engineer and possibly other specialist consultants also.

'"Why should this be?" asks the irate client. "What am I paying my architect 6 per cent for? Why are these fees not inclusive?" One must have a good deal of sympathy with this point of view, but it helps towards understanding if you will remember that large buildings nowadays are extremely complex in their design, costing and servicing, and that the architect who is an artist and who also is thoroughly expert in such things as steelwork design, heating and ventilating and so forth just does not exist. This means that the specialist consultant has made his appearance, and naturally expects to be paid for his services. You, as a client, get a better building for your money.

'Many building owners, while accepting the need for such consultants, could wish that an inclusive fee could be quoted to cover all professional services. Such clients will learn with pleasure that this matter is now under consideration by the Royal Institute of British Architects and the other professional bodies most closely concerned.

'These qualities, then, are required of you and of all building owners who wish to qualify for the category of "Good Clients"—ability to pick the right architect; to trust his judgment; to avoid at all costs pressing for a too early start before the builder has had adequate time to organise; and lastly to be patient and not to change your mind needlessly once construction has started.

'This catalogue of virtues, you may say, is such as would make the archangel Gabriel the only perfect building owner. But to know what is needed of us in any situation is to be half-way there.'

A vote of thanks was proposed by MR. GERALD HILL, OBE, past-president LMBA.

Fire Precautions in Buildings

Primary Needs for Effective Fire Fighting

Some of the lessons to be learned from practical experience on the fire ground and a description of fire-fighting equipment and appliances which should be installed in buildings of all kinds were described by Mr. F. W. Delve, CBE, chief officer of the London Fire Brigade, in a paper to an ordinary general meeting of the Royal Institution of Chartered Surveyors on January 2. Extracts from Mr. Delve's paper are given below.

BEFORE THE WAR, building in London was generally confined in height to below 100 ft. except for occasional architectural features. The present trend is to build higher and higher and in the past few years many buildings of greater height than 100 ft. have been erected. The highest building under construction at the present moment is on Millbank and will have a height of about 387 ft.

In general, a multi-storey building presents a more difficult problem for fire-fighting than a single-storey building, and the greater the height the more complex this problem becomes. Up to the 80 to 100 ft. height certain fire-fighting operations can be conducted from fire brigade ladders, but when a building rises above these heights all fire-fighting, and indeed rescue work, must be done from within the building and to achieve this certain features become essential. These can be summarised as follows:

(i) Satisfactory access for brigade appliances up to entries to a building.

(ii) A means whereby upper floors can be reached quickly.

(iii) A suitable area within the building in which firemen can assemble and prepare their equipment for fire-fighting.

(iv) The means for fighting a fire.

(v) A safe exit should the need to withdraw from a building be necessary.

Of the foregoing, item (i) is dealt with above, item (ii) can be catered for by the provision of a lift which firemen can take control of by means of a 'fire switch' at building entrance level. Such a lift should be of a size and loading that it can carry a crew of firemen with their equipment (not less than 1,200 lbs); be of a speed relative to the height of the building, that is, its time of travel from the ground to topmost storey should be about 1 minute. Above all, the lift must be suitably sited in a ventilated lobby between the floor area and a staircase.

A suitable area (item (iii)) is a ventilated lobby (or lobbies where the floor area is in excess of 10,000 sq. ft.). Means of fighting a fire (item (iv)) is provided for by the installation of dry rising mains up to the 200 ft. height, wet rising mains, adequately boosted, above that height and by hose reels and such other fire equipment necessary to tackle the fire risk at large.

A satisfactory means of exit (item (v)) can only be provided by the installation of enclosed fire-resisting staircases, adequately ventilated and suitably sited, one or more of which can be entered only by way of a ventilated lobby.

Other items of concern to firemen in high buildings are the materials used for ceiling and wall linings, construction of partitions, etc., which above the height of 80 ft. should be incombustible. One other matter that is adding complexity to fire-fighting problems in high buildings is the increasing practice of fully air-conditioning buildings. When this equipment is installed it should be ensured that the controlled air movement is such that, in the event of a fire, smoke would not be drawn into corridors, staircases or other escape routes.

Means of Escape

The fundamental here is to provide means whereby persons in any part of an affected building can, by their own unaided efforts, reach the safety of a street. To achieve this requires a sufficiency of exits from each floor area, having regard to the size of that floor area, the number of persons likely to be present, and the risk at large in the building. Where staircases form part of an escape route, their positioning is of the utmost importance. It is, for instance, useless to provide an adequate number of escape routes if they are not satisfactorily protected against smoke and fire. This truth increases in importance with height of the building and becomes crucial in buildings in excess of 80 ft., because any floor above this level is beyond the reach of the fire brigade's highest ladders.

The positioning of exit staircases has been referred to, but no matter how ideal the position their use is negatived if they are not enclosed with incombustible materials which will withstand for a reasonable time any fire that may occur. Staircases should always be sited against an external wall where openable windows can vent the staircase; and the openable portion at each storey level should be not less than 15 per cent of the area of the staircase enclosure.

Doors between the floor area and the staircase should be fire-resisting, self-closing and as smoke-tight as possible. Staircases should discharge into the open air at ground level. Ventilated lobby staircases are fire-fighting staircases. The lobby is served by a fire lift and contains either a dry-riser or wet-riser hydrant outlet. Firemen can assemble there and prepare to fight a fire in reasonable safety. Indeed, in high buildings beyond the reach of ladders the lobby is the only 'bridgehead' a fireman has between the staircase and a fire on a floor area.

Smoke-stop Doors

Reference has been made to smoke and for the need to keep it out of escape routes and staircases and this may be an appropriate place in which to state: 'It is smoke that kills.' When persons lose their lives as the result of fires in buildings, it is but rarely that burning is the cause of death. Carbon monoxide in the smoke is the more common cause. It is often the unhappy lot of a fireman to find the body of a person in part of a building which the fire has not reached.

Smoke doors are provided to stop, or at least defer for a reasonable period, the onset of conditions just referred to. The following faults are often found with smoke-stop doors:

(i) doors which fit well into a rebate yet possessing a considerable gap between doors and the floor;

(ii) double swing doors with rebated meeting edges but lacking a suitable selector mechanism to ensure that they close in the correct sequence;

(iii) double doors without rebated meeting edges, thus leaving too wide a gap between the doors when closed;

(iv) doors fitted with self-closing devices which fail to function if the doors are opened beyond 90 degrees;

(v) the fixing on to doors of cabin hooks and other devices to hold them open;

(vi) the replacing of fire-resisting glazed panels with light glass;

(vii) the use of wedges, string and other expedients to hold doors open;

(viii) storage within or near doorways which obstructs the closing of doors; and

(ix) some cases where doors have been removed altogether because they impede the passage of persons.

Fire Appliances

Automatic sprinkler protection.—This is a means whereby water in small-bore pipes at ceiling level is conveyed to discharge heads sited at between 8 and 10 ft. centres according to the risk. Each discharge head is sealed by a valve which is held in position by a device which will fail at a predetermined temperature. These devices are either struts soldered together by a fusible alloy or quartz bulbs filled with a liquid which will expand on the application of heat until the bulbs burst.

Some sprinkler installations are 'wet,' that is, all the pipework contains water, and provided the building is adequately heated there is no chance of the water freezing; others are 'dry,' that is, the pipes are filled with air under pressure. When the air is released by the opening of one of the discharge heads, this permits water to enter the pipes. These installations are used in atmospheres where the risk of freezing is always present. The so-called 'alternative' installation employs a differential valve which allows an installation to be 'wet' in warm weather or 'dry' in cold weather.

Automatic Fire Extinguishing Apparatus.—It is sometimes necessary to protect plant by special fire-extinguishing equipment, which, like a sprinkler, will operate automatically under fire conditions. Where oil-fired boiler rooms and oil storage rooms are so sited that they offer fire exposure risk and are not

readily accessible from the open air for fire-fighting, they should be protected by a suitable automatic installation.

Internal Fire Hydrants and Hose Reels.—Internal fire hydrants with large diameter hose for use by the occupiers of a building are generally not required or recommended these days. The use of such equipment requires more than one person to operate it and it cannot be effectively used unless those persons are specially trained. Internal fire hydrants would be required for the use of fire brigades in buildings which exceed 200 ft. in height, and those where fire mains in the streets are not immediately adjacent.

It is the current practice to install in buildings hose reel equipment which consists of not more than 100 ft. of ¾-in. tubing fitted to a reel and hydraulically connected to a satisfactory water supply. The discharge end is fitted with a shut-off nozzle of $\frac{3}{16}$-in. diameter. The water supply should provide a flow of 30 gal. per minute at 30 lbs. per sq. in. at the highest outlet. Hose reels should be installed at or by exits from a floor and in such a position that their operation will not hold open smoke-check doors, and where they will give cover to the whole of the floor area.

Dry Rising Mains. — These are fire mains suitably sited within a building and are not charged with water; they are of 4-in. diameter with inlets in the external face of the building at ground level, into which hose from fire brigade pumps can be connected. Valve-controlled outlets to which fire brigade hose can be connected are provided at all levels above the ground floor. Dry rising mains are provided in all high buildings up to 200 ft. in height (this is the maximum height to which brigade pumps can be effectively used), and their purpose is to allow fire-fighting to commence quickly at high levels. It is recommended that dry rising mains be provided in all buildings exceeding five storeys in height.

In buildings exceeding 200 ft. in height a wet rising main is required and to ensure that water is available at these high levels they must be provided with two independent sources of water supply and dual pumps with an alternative power supply, to provide a minimum pressure of 60 lb. per sq. in. at the highest outlet —in residential blocks 200 gal. per minute minimum flow, office blocks 300 gal. per minute.

Smoke Outlets.—Fires in basements, where the limited outlets cause smoke and heat to build up rapidly, are some of the most difficult that fire brigades are called upon to tackle. To assist in clearing smoke and heat from below ground floors, smoke outlet shafts are required in such a number and in such positions as to ensure that a through draught can be formed.

Foam Inlets.—In cases where the fire separation is satisfactory but the oil fuel boiler or storage chamber is not readily accessible for fire-fighting, a foam inlet may be installed. This consists of a 2½-in. diameter pipe fitted with a connection at street level to which the brigade can attach their foam making equipment, and terminating in the boiler room or storage chamber.

The Evolution of Planning Control

Controlling the Balance Between Vested and National Interests

THE FIRST HALF of the twentieth century will be remembered as a period of progress. It is matched by the first half of the nineteenth when even more fundamental changes occurred. The Industrial Revolution commencing around 1770 gathered momentum as the eighteenth century ran out. The textile industry was first affected; the invention of mechanical looms led to the grouping of cottage spinners and weavers in factories. Steam replaced water as the main power, industrialisation increased apace. From a predominantly rural economy, almost overnight, Britain became an industrial nation with a large urban population.

Without thought for the future, industrialists and speculators bought land for the erection of factories and houses. There arose in a very short time vast agglomerations of identical cottages. At this time there were no local authorities and virtually no powers of control existed. The housing of the working classes was unplanned, insanitary, and by any decent standards totally inadequate.

A severe cholera epidemic led to the passing of the Public Health Act, 1848, but it was not until 1875 that any really effective measures were taken. The Public Health Act, 1875, as its name implies, was concerned largely with sanitation. Urban and rural sanitary authorities were formed—later to become the urban and rural district councils of today. These sanitary authorities were charged with the duty of providing an adequate water supply and making necessary arrangements regarding sewers and the disposal of sewage. The Act also prescribed minimum requirements in respect of width of streets and the distance between the backs of houses. Estate developers had to submit plans of their proposals conforming with the requirements of the Act.

To avoid unnecessary expense the same house plan was repeated 'ad infinitum,' and the minimum requirements became the accepted standard. The result is seen in the 'grid iron' pattern of identical streets and houses which is such a depressing feature of most of the old industrial towns of this country.

It is interesting to note that the 1875 Act, so far as it affected private street works, remained the main Act for this purpose until largely superseded by the New Streets Act, 1951.

Although the Public Health Act, 1875. represented a considerable advance it failed in several respects. It contained no powers of control. Consequently houses and factories went up cheek by jowl. The development of one piece of land was carried out with complete disregard for the future possibilities of the next section. It was not unknown for one estate developer to build with the set purpose of preventing the development of neighbouring land not in his ownership.

It was not until 1909 that there was any mention of town planning. The Housing and Town Planning Act of that year was not very effective and until 1919 no real attempt was made to grapple with the problems. The Housing, Town Planning Act, 1919, made it compulsory for the first time for local authorities to prepare a scheme for land under development or likely to be developed. In 1925 a new Act found its way on to the statute books. By this time town planning was considered of sufficient importance to warrant an Act to itself.

By 1932 there were so many Acts dealing entirely or partly with town planning that it was thought necessary to wipe the slate clean and start again. The Town and Country Planning Act, 1932, repealed all existing legislation and instituted a new set of rules. One of the important changes was the power to control development in built up areas. Previously only undeveloped land could be made the subject of planning control. It is freely accepted to-day that it is just as important to control building in the older parts of a town as on the fringes. Other important features related to the flexibility of a scheme, preservation of woodlands and control of advertisements.

Local authorities have had powers to control development ever since 1909. It is woefully apparent that there has been little exercise of these powers at least until comparatively recent times.

As is so often the case the stumbling block was financial. If a planning scheme imposed conditions or tended to prevent development its sponsors became liable to pay compensation to owners whose land was injuriously affected.

In theory the orderly development of land results in a general increase in value. The imposition of restrictions on one part of a locality adds to the value of land elsewhere. Therefore compensation paid by a local authority in respect of injurious affection should be recouped from 'betterment' enjoyed by neighbouring land. This theoretically simple arrangement was found to be almost impossible in practice due to the difficulty of assessing the cash value of the compensation and proving the recipient of the betterment.

All the town planning acts from 1919 to 1943 included sections dealing with compensation and betterment. The problem became increasingly more involved. Planning authorities were deterred from

carrying out their functions by the possibility of heavy compensation as opposed to the meagre return probable from betterment claims capable of substantiation.

Three Reports

The position was such that in spite of a pre-occupation with other more immediate matters in 1940-1942 the Government of the day initiated three reports dealing with planning and compensation. The Barlow Report published in 1940 dealt with the industrial scene. It recommended that a board should be set up to examine the problems of the location of industry and to achieve a redistribution of the urban population over the country as a whole.

In 1942 the Scott report focused attention on rural matters. It mooted a central planning committee with overall planning control. It also called for an inquiry into the public utility services and suggested a national parks authority. The Uthwatt report was also published in 1942. Properly known as the 'Report of the Expert Committee on Compensation and Betterment' its recommendations were far reaching and in some respects revolutionary.

It maintained that the necessity, under existing planning law, to pay compensation for depreciation of land values prevented good planning. Owing to the difficulty in deciding where development might take place undue amounts were paid in compensation. The report propounded that development value in the country as a whole was not extinguished by the imposition of planning control. It was merely shifted to another place. Consequently it was recommended that the development rights in undeveloped land should be transferred to the state. Compensation payable to owners would be limited to a proportion of a total amount fixed for the whole country.

Many of the recommendations of the Uthwatt report were unacceptable to a coalition government. A white paper was issued in 1944, on the control of land use. The Town and Country Planning Act of that year gave local authorities power to purchase land required for redevelopment. Otherwise the report was shelved.

The social revolution of the post-war years was perhaps foreshadowed by the next Town and Country Planning Act—that of 1947. Hitherto the law of this country affecting land was based on the inviolable right of property. The Act of 1947 made radical changes in the law. The right to develop land was vested in the state; no development could take place without permission. It was hinted that consent was necessary before changing the colour of external paint work.

In many respects the Act only laid down basic principles. The application of these principles was to be by way of regulations made under the Act. There was some genuine, and much simulated, fear of bureaucracy. However the development rights in land were not expropriated. Following the suggestion made in the Uthwatt report the development value of the country as a whole was assessed. This was fixed at £300m. This sum was to be apportioned between individual claimants.

The lack of enthusiasm evinced by land owned for this section of the Act is understandable. Apart from the uncertainty that any claim would be met in full, payment was to be in Government Bonds. The financial state of the country at that time did not encourage optimism about the value of such bonds.

Bitter Controversy

Since development value was vested in the State in theory land should change hands at existing use value. Farmland bought for building should be purchased at agricultural prices. When planning permission was granted the development value was assessed and paid by way of a development charge. Broadly speaking no compensation was payable when planning permission was refused since it was held to have been already paid for. When land was acquired by local authorities—and this at a time of extensive municipal building projects—it was acquired at rock bottom prices. Compensation and betterment, the bars to orderly development, were disposed of.

The Town and County Planning Act, 1947, was a bitterly contested political experiment. The reasons for its failure, and conjecture on how near it came to success make an interesting study. Suffice to say that in 1952 development charges were abolished whilst in 1954 further steps to unscramble the 1947 Act were taken. The Town and Country Planning Act, 1954, modified the method of compensation for land compulsorily acquired although existing use value was still the basis. In cases of refusal of planning permission the expenses of compensation were to be borne by the Exchequer.

Considerable agitation continued and in 1959 a new Act was passed which for all practical purposes reinstated the 'status quo' prior to the 1947 Act.

So events have moved in a full circle. On the crest of a wave of prosperity and land development those responsible for good planning are chary of using the powers entrusted to them. Vested interest has superseded national interest. It is to be hoped that the results will not be comparable with the depredations of the last age of the industrial and commercial barons.

R. P. PIKE.

Building Wages and Hours

Settlement for 42-hour Week and 6d. an Hour Wage Increase from October: Employers No Longer to Pay for Tea-breaks

THE NATIONAL JOINT COUNCIL for the Building Industry, at its statutory meeting in London on January 12, reviewed the wage rates of building trades operatives as required by the constitution of the Council and found that an increase in wage rates of ½d. per hour is due to take effect on February 6, under the industry's sliding scale agreement.

The Joint Council also received the report of its committee which has been discussing working hours and wage rates, and approved the recommendations of the committee for a settlement of both issues. Under this settlement the working hours of building trades operatives will be reduced from 44 to 42 with effect from October 2, 1961, and the Grade A standard rate for craftsmen will be advanced by 6d. per hour to 5s. 6d. This increase applies also to labourers. From the same date there will be modification in the matter of overtime control and of the present regulations on meal breaks.

The present craftsmen's Grade A rate, which operates throughout England and Wales, except London and Liverpool, is 4s. 11½d. an hour. With effect from February 6, 1961, it will be 5s. an hour, and with effect from October 2, 1961, it will be 5s. 6d. an hour. In London and Liverpool all building operatives are paid 1½d. an hour above the Grade A rate.

The building labourers' rate is 7½d. an hour below the craft rate.

Background to Negotiation

THE BACKGROUND to the settlement—which MR. D. E. WOODBINE PARISH, President of the National Federation of Building Trades Employers, described as 'heralding a new spirit in negotiations between employers and operatives' — was explained by MR. PETER TRENCH, Director of the National Federation, at a Press conference in London last week.

In negotiating the settlement, said Mr. Trench, it had been necessary to be realistic. Figures showed that in recent years about 5½m. workers in industry had been granted shorter working hours, and as a consequence the position of the building operative in regard to wages, earnings and status had deteriorated. It was important that, with the influx of school leavers coming shortly to the labour market, the position of building should be not allowed to worsen.

The employers had stipulated October 2 next as the date on which the settlement should begin to operate for the reason that much building currently being carried out was on a firm-price basis; employers therefore had to be given reasonable notice; it was much to the credit of the Operatives' representatives that they had accepted this fact.

'A further point' said Mr. Trench, 'is that the building industry is going into 1961 with a record volume of work ahead of it and it is vital that we do not set an inflationary pattern for the future.'

The Upshot of the Settlement

The upshot of the settlement was that, in October next, the operatives would get what, in shorter hours and higher wages, approximated to a 10 per cent wage increase. On the other hand, they would have waited for about 18 months for this

increase, and stability in regard to wages could be envisaged until at least May, 1962. That was an important factor.

How was the cost of the settlement, which could in round terms be put at £60m. annually, be met? First, said Mr. Trench, productivity over the last 12 months had risen by about 4 per cent, and he thought it not unreasonable for the industry to set itself the target of achieving rapidly a further similar rise. The employers hoped to make their contribution through means which included the new technical information service; an active educational policy, directed especially to management; an increase in output of technical publications devoted to production; an extension of the Builders' Advisory Service which already had a staff of six consultants at the disposal of members; further developments in mechanisation; and, lastly, through the Construction Equipment Exhibition due to open in June on the Crystal Palace site.

'Through these means and with the help of the operatives,' declared Mr. Trench, 'I am confident that we can reach the target of a further 4 per cent productivity.'

The operatives would make their contribution in part through the new clause in the Working Rule Agreement which limited meal breaks to a total of one hour per working day. This would include tea breaks which, as a legacy of the war, were costing the employer, and through him the building owner, the equivalent of about half an hour each working day. 'Employers,' said Mr. Trench, 'are not opposed to tea-breaks; on the contrary. But we are opposed to paying for unproductive time. With the settlement we hope to rid ourselves of the wartime legacy of the paid tea-break, which is itself equivalent to adding 4d. an hour to the weekly wage-packet.

Better Discipline on Sites

'By the means outlined, and through getting better discipline on the sites, we hope to absorb these increases and, indeed, other charges which are coming on employers, such as higher insurance contributions, and even leave a little over to meet the higher prices of materials such as cement and bricks which have lately been added. We forecast this rise in productivity on the basis of the experience of 1960, when labour costs rose by nearly 5 per cent but construction costs by only 1 per cent, showing that much of the cost of higher pay had been absorbed.

'That, at any rate, is our hope,' said Mr. Trench. 'It is more likely, however, that the increased labour cost will be absorbed with nothing over for these other burdens, and it may well be that building costs will rise perhaps by as much as 4 per cent by the end of the year.

'What we hope for from this settlement,' concluded the Director, 'is an encouragement of forward planning in industrial conditions; it gives our industry a chance to set a target for industrial production and to get away from the pattern of annual wage claims and to receive in return a period of stability.'

Modification of Overtime Control

SUBSEQUENT TO THE DIRECTOR'S STATEMENT, Mr. Woodbine Parish and the Director answered questions. On the subject of the tea-break, MR. TRENCH said that if the operatives on any site wished to extend the total duration of meal times beyond one hour each day the amount by which it exceeded one hour would be worked without pay at the close or beginning of the normal working hours. The relative clause to be added to the Working Rule Agreement stipulated that the dinner break must not be less than 30 minutes.

This had been agreed by the building unions which had also agreed that one hour's overtime a day could be worked without the permission of a local joint committee.

Questioned on the period of stability achieved, MR. TRENCH said there was nothing to prevent the Operatives' Federation presenting a claim next November for a further increase.

Civil Engineering Wages

Claim for Additional 8d. an Hour

THE 250,000 operatives employed in the civil engineering industry will receive a wage increase of ½d. per hour on and from Monday February 6. There is also a claim for an increase of 8d. per hour outstanding. The ½d. increase is in accordance with the industry's sliding scale agreement based upon the index of retail prices.

From February 6, the basic rates of pay in the civil engineering industry will be:

Navvies or Labourers.—London Area (London Super Grade), 4s. 6d. per hour; remainder of England, Wales and Scotland (Class I) 4s. 4½d. per hour.

Craftsmen.—London Area (London Super Grade), 5s. 1½d. per hour; Liverpool Area (Liverpool Grade), 5s. 1½d. per hour; remainder of England, Wales and Scotland (Class 1), 5s. per hour.

'No Need for Costs to Rise'

Mr. Woodbine Parish's Advice to Eastern Federation

MR. D. E. WOODBINE PARISH, FIOB, National President, speaking at the annual general meeting of the Eastern Federation of Building Trades Employers, at Cambridge, on January 11, said that 'the outcome of the proposed building wages settlement, under which an increase of 6d. an hour was likely to come into effect in October next, had led many to believe that a rise in building costs of that proportion towards the end of the year was inevitable.

'Such a conclusion is, I submit, misleading to the general public and scarcely suggests that we are fully alive to our responsibilities as private enterprise contractors in what is essentially a service industry,' he declared. 'It is worth remembering that in the last year or two there has been a distinct rise in building productivity. There is no reason to believe that such a rise will not continue—in fact, it is vital that it should continue. Surely we cannot claim, although doubtless many of us would like to be able to do so, that our building organisations are already so efficient that there is no room for improved performance by which we may absorb some of the effect of the increase in our wages costs, which after all does not come into effect until October 2 this year.

'Again,' Mr. Parish continued, 'we may be in danger of forgetting the concession our representatives have managed to negotiate with the Operatives regarding the strict control of refreshment breaks, including those for tea in the mornings and afternoons. If we, as employers, apply and operate this new arrangement in the right way it is reasonable to calculate that a large part of the wage increase would be absorbed, as the saving of unproductive time, previously paid for, could be considerable. Much of the remainder of the wage increase can be taken up by other improvements in the running of our firms.'

He mentioned these matters because it was the easiest thing in the world to pass on a wage award and just make the client pay. What they must do, in the interests of the community, was to so organise and plan their affairs that they absorbed as much of it as possible.

Plan for the Leas at Folkestone

Local Architect's £3m. Scheme

GREAT INTEREST has been aroused in Folkestone by a £3m. plan for the Leas put forward by Mr. John Floydd, ARIBA. The plan envisages the complete redevelopment of the Leas from the War Memorial to Clifton-crescent. All existing buildings would come down, and in their place would be eight new hotels, providing accommodation for over 700 —double the number available today. Flats would be incorporated in some of the hotels, and there would also be several blocks of flats, including two of 18 storeys. There is also provision for shops, offices, a restaurant, a dance hall and car space for 500 cars. Banqueting and conference facilities would be provided in the larger hotels.

Mr. Floydd wants the present road through the Leas to be abandoned. The only access to the hotels and flats would then be by roads at the rear of the buildings. Much of the Leas property is owned by the Lord Radnor Estate.

Architects and the Law of Copyright

Reproduction of Two-Dimensional Drawings by the Erection of Buildings

BY WILLIAM GILL, FRIBA, AMTPI

It is now over three years since the Copyright Act, 1956, came into force (June 1, 1957) and the following is a brief summary of this branch of the law which vitally affects the architectural and allied professions. Part I deals with more general ramifications of the law and Part II with the new Copyright Act.

Part I—General Law

AT COMMON LAW, works of art such as architects' drawings and designs were not fully protected. It was not until the passing of the Fine Arts Copyright Act in 1862 that works of art of any kind were given some measure of protection from persons openly and wantonly 'cribbing' other peoples' artistic efforts. By the 1862 Act, copyright rested in the author of a work of art for his lifetime and for seven years after his decease. The measure of protection afforded by the Act was severely limited as is shown by a case decided in 1894.

In *Hansfstaengl v Empire Palace, (1894) 3, Chancery 109,* the Court of Appeal held in effect that the reproduction of architects' drawings in two dimensions by the erection of the buildings in three dimensions, did not make an infringement of the architects' copyright in the design. This unhappy decision continued until Parliament decided, in 1911, to place the law of copyright on more rational grounds. The Copyright Act, 1911, was an important piece of legislation because thenceforth the author's copyright was extended for his lifetime and for fifty years thereafter; and moreover, a literary work was defined to include maps, charts, plans, tables and compilations.

Section 35 (1) of the 1911 Act, since replaced by Section 3 (1) of the Copyright Act, 1956, protected any building or structure having an artistic character (i.e. pertaining to or befitting an artist) provided that the protection afforded by the Act was confined to the artistic character or design, and was not extended to processes or methods of construction. It should be noted that although the owner of such a copyright could get damages for an infringement of his work, if the persons making the copy had begun to erect the actual building, the owner of the copyright could not, and even now cannot, obtain an injunction to prevent the building work continuing, or to have the building demolished once the work has commenced.

There are three important court cases based on the 1911 Act which affect architects' work. The first, decided in 1931, was *Blake v Warren—(1931) McGilliverays Copyright Cases 1928—35, p.268.* In this case it was held that designs for the front elevation of semi-detached houses were copyright, owned by the designer, since he had so designed the houses to merit them as novel treatment of an architectural problem. The design of the gables and doors was unusual and the disposition of the solids and voids uncommon. The court held that: 'Copyright would exist if there was a design something apart from the common stock of ideas, i.e., something which strikes the eye as unusual.'

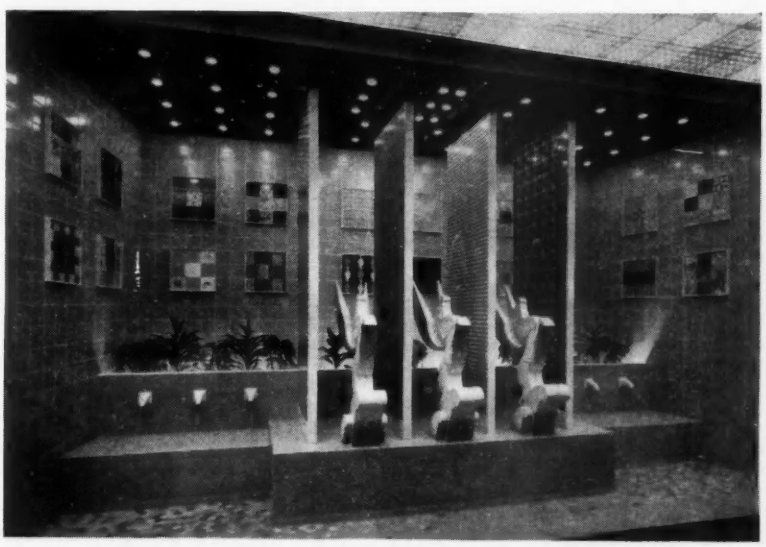
The second case was decided in 1936. The facts in *Chabot v Davies—(1936) 155 LT p.525*—were that an architect had sent a blue-print of a shop front to his clients. The clients did not commission the architect to carry out the work. but handed the drawings to a firm of builders. The builders caused tracings to be made of the architect's drawings, and from these tracings they erected the shop-front. The architect was successful in his action for an infringement of copyright and Mr. Justice Crossman awarded him 100 guineas as damages, which would have been his fee for the original drawings. The judge ruled that the blue-print was an original literary work and was copyright, and that the erection of the shop-front was the reproduction of a substantial part of the work in a material form. Under the 1956 Act such plans are protected as 'artistic works.'

The third case was that of *Meikle v Maufe — (1941) 3 All ER 144.* An original building had been erected in 1912 and there had been no special terms as to the ownership of the copyright in the drawings, which was actually vested with the architect. In 1935 another architect was commissioned to extend the same building, and in his drawings incorporated certain features which had distinguished the original building. He also reproduced the interior to a large degree. The argument was that there was no separate copyright in a building as distinct from the drawings. The late Mr. Justice Uthwatt (as he then was) decided to the contrary. The judge remarked that the point of an architect's activities was not the making of plans as such, but the embodiment in a building of artistic and other ideas which he had in mind.

The plan was a means to an end, and not an end in itself. To deny originality only to the plans would be to give reality to the shadow, and refuse it to the substance. Protection was limited to the artistic character or design embodied in the building, and in that the builder played a part. He, like his plans, was only part of the machinery employed in the production of the structure, which embodied the design and ideas of the architect.

In other words copyright in a work of architecture is an addition to, and independent of, that in the plans for the building. It is reasonable to suggest that if an architect wishes to waive his copyright in his designs for repeat purposes by another architect, his fee should be

The centre piece of the British Ceramic Tile Council's exhibit at the Ceramic Exhibition staged recently at Stoke-on-Trent. A fountain of tiles is dominated by triple Pegasus mosaic sculptures each ejecting a vertical spray of water and set between four vertical fins flanked by sets of water sprays. Behind this a series of smaller water sprays forms a background to an horizontal tiled floral display. The twenty wall panels show examples of modern tiles



one-third of the fee of the architect who actually carries out the work for the client.

Part 2 — The New Copyright Act

IN PART ONE of this article the development of earlier law and its culmination after the Act of 1911 is described. The Copyright Act of 1956 contains all the law of copyright from the Statute 8 Anne Chapter 19 (1709) onwards. The purpose of the new Act was to cover all technical and other developments since 1911. The Act refers for the first time to 'qualified persons,' i.e. persons to whom the Act only extends. As a result, copyright now depends on nationality, domicile or residence of the author, and not, as formerly, on the place where the work was originally published or made. The Act contains a special exception where copyright subsists in an artistic work and a corresponding design is registered under the Registered Designs Act, 1949. The statute also sets up a Copyright Committee, but there are important sections which concern architects.

Section 3 (1) defines an 'artistic work' as: (a) Paintings, sculptures, drawings, engravings and photographs, irrespective of artistic quality. (b) Works of architecture, being either buildings or models for buildings. (c) Works of artistic craftsmanship, not falling within either of the preceding definitions. Section 3, subsection (1) corresponds to the definition of an 'artistic work' in Section 35 (1) of the Copyright Act, 1911. Copyright in works of architecture is additional to, and independent of, that in the plans for the building.

Copyright shall subsist in every original artistic work which is unpublished, and of which the author was a qualified person at the time when the work was made, or if, extended over a period, was a qualified person for a substantial part of that period.

Conditions of Copyright

Where an original artistic work has been published, then subject to the provisions of this Act, copyright shall subsist in the work, if, but only if: (a) The first publication of the work took place in the United Kingdom or in another country to which this Section extends (i.e., those countries which adopt the Universal Copyright Convention 1952—about 60 States) or: (b) The author of the work was a qualified person when work was first published or: (c) He had died before that time but was so qualified immediately before his death.

Copyright shall continue to subsist until the end of 50 years from the end of the calendar year in which the author died and shall then expire. The copyright in a work of architecture is not infringed by the making of a painting, drawing, engraving or photograph of the work, or the inclusion of the work in a cinematograph film or in a television broadcast, provided its inclusion therein is only by way of background or is otherwise only incidental to the principal matters represented in the film or broadcast.

The copyright is not infringed by publication of a painting, drawing, photograph or film if the making of such painting, etc., did not constitute an infringement of the copyright.

Where copyright subsists in a building as a work of architecture, the copyright is not infringed by the reconstruction of that building, and where a building has been constructed in accordance with architectural drawings or plans in which copyright subsists, and has been so constructed by or with the licence of the owner of that copyright, any subsequent reconstruction of the building by reference to those drawings shall not constitute an infringement of that copyright.

The foregoing, which is sub-section (10), was incorporated in the Act as a result of the good offices of a committee of the Royal Institute of British Architects.

Section 10 of the Copyright Act, 1911, provided that no action for infringement of copyright was to be begun after the end of a period of three years, beginning with the date on which the infringement occurred. For several practical reasons this Section was omitted from the 1956 Act and the result is that the period is now governed by Section 2 of the Limitation Act, 1939. This provides for a period of limitation of six years in lieu of the three-year period prior to the new Act. The period of limitation begins to run at the time when the cause of an action (i.e., the earliest time at which an action could be brought).

The Limitation Period

If the wrongful act is actionable by itself, without any proof of actual damage, the limitation period commences when the wrongful act is actually committed, as in the case of a libel. If, however, the wrongful act is not actionable without actual damage being shown, the limitation period commences when the damage occurs, as in the case of fraud or negligence. It would appear that in most cases of infringement of copyright, damage would have to be proved, that is, when the owner of the copyright shows that he has suffered in some way. 'Prima facie' this would be on the duplication of his designs, but if the infringement was done in secret then on the completion of the actual building.

The new Act contains several useful definitions of practical importance to architects for by Section 48 'building' includes any structure; 'drawing' includes any diagram, map, chart or plan; 'Engraving' includes any etching, lithograph, woodcut, print or similar work not being a photograph; and 'sculpture' includes any cast or model for the purposes of sculpture.

The law of copyright everywhere contains reference to the word 'publication,' and Section 49, subsections (1), (2) and (3) supply the answer to what does not, and what does, constitute 'publication.' As far as architects are concerned the following do *not* constitute publication:

1. The exhibition of an artistic work.
2. The construction (or erection) of a work of architecture.
3. The issue of photographs or engravings of a work of architecture or of a sculpture.

An artistic work is therefore taken to be published if, but only if, reproductions of the work have been issued to the public (Section 49 (2) (c). 'Reproduction' means (Section 48 (1) in the case of an artistic work, a version produced by converting the work into a three-dimensional form, or, if it is in three dimensions, by converting it into a two dimensional form. 'Publication' was defined as stated in the 1911 Act. The 'public' does not mean, of course, all the inhabitants of a town, but any section of the public (just as in the law of libel 'publication' means to any member of the public other than the wife or husband of the person issuing the libel).

Some Explanatory Notes

Section 3(1). The reason for the words 'irrespective of artistic quality' being omitted from Section 3(1)(b) was because the RIBA drew attention to the difficulty of applying the definition of 'artistic work' to works of architecture. Thus architectural 'drawings' are included under Section 3(1)(a), but not works of architecture, for as it was seen in the case of *Meikle v Maufe*, copyright in completed works of architecture is in addition to, and independent of, the drawings prepared for the erection of the building.

Section 3(2). This sub-section means that although original works of art (such as architects' designs) may never be actually published (i.e. seen by or issued to the public, by exhibition or otherwise), a copyright subsists in such unpublished designs.

Section 3(3). This sub-section means that copyright will subsist and will continue to be vested, in the owner of a published original work of art, only, (1) if the work was first published in the United Kingdom and the other countries which comply with the Copyright Convention; (2) if the author was a qualified person at the date of publication; and (3) if he had died prior to publication, he was so qualified immediately before he died.

Section 3(4). Other than the provisions in the preceding sub-sections copyright will exist in author's works during his lifetime and fifty years thereafter.

Section 9 deals with exceptions from protection of artistic works, and in subsection (9) provides that if the same author subsequently designs a subsequent artistic work and reproduces his earlier work, whether by drawings, casts, sketches models, moulds or studies, no infringement of the original design is involved, except that the main design must not be repeated or imitated.

Rural District Council Surveyors

THE FIFTEENTH annual conference of the Association of Rural District Council Surveyors will be held in the Opera House Foyer, Blackpool, from Wednesday, April 26 to 27. The conference will be presided over by Mr. J. J. McIntyre, CBE, and will be devoted to the work and duties of rural engineers and surveyors. It will include a forum for open discussion of rural problems, papers on topical matters, and an exhibition of plans of work being carried out in rural areas.

American Brick Packaging & Strapping System

Advantages of Reduced Handling Costs and Fewer Breakages

BY J. A. EDWARDS

BRICK MANUFACTURERS have for a number of years explored methods of packaging bricks in order to reduce handling costs, speed loading and unloading, avoid breakage and at the same time provide more uniform colour blending.

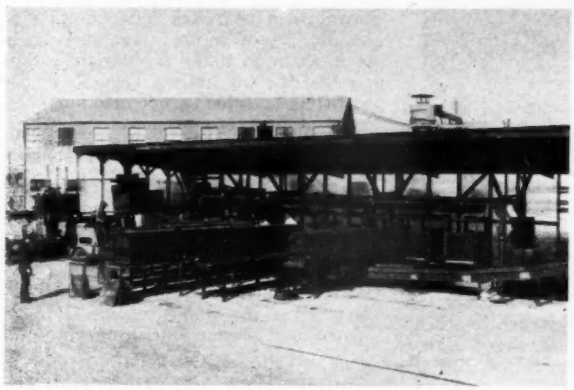
The Link-Belt Company of Chicago, working with Acme Steel Company, has recently provided one solution to the problem—a simple, practical brick packaging and strapping machine which makes it possible to package as many as 120,000 bricks in an eight-hour day, tightly strapping them in packs of 100 bricks, and binding two or more packs together for the most economical handling from brickyard to job site.

The 100-brick packs made by the Link-Belt/Acme Steel brick packaging and strapping machine have a particular appeal to the ultimate user, the contractor. The first brick packaging was done in large packages of 350 to 500 bricks. These packages offer handling economies to brick manufacturers and dealers, but few contractors have equipment to handle 2,500 lb. units. Therefore it was necessary to design a means for packaging smaller units.

The Link-Belt/Acme Steel machine is a complete materials handling system which provides a simple means for blending bricks for desired colour shades, stacking the bricks in units and delivering them through a chute to a strapping station.

Any desired number of 100-brick packs can be secured together by means of heavy paper strips along top and bottom corners of the pack, so that they can be moved in larger units within the brickyard and to their destination. Individual strapped 100-brick packs are easily separated for movement to work areas at the job site.

Packaging reduces handling costs for the brick plant, the dealer and the contractor. It results in faster, lower-cost loading and unloading, simplifies inventory methods and reduces breakages. Construction conditions vary, but contractors using packaged brick in 100-brick packs have reported a reduction in the cost of brick walling amounting to as much as $10 to $20 per thousand bricks due to savings in labour, increased effi-



Brick packaging area at the Robinson Brick & Tile Co., Denver, has six power-driven feeder tables which carry kiln cubes of bricks to stackers. Conveyor carries stacks of 100 bricks to strapping unit, at left end of enclosure. Broken bricks are discharged to a belt conveyor

Jigs on Link-Belt/Acme Steel brick packaging and strapping machine at Robinson plant are manually loaded from stock cubes on feeder tables. Each man puts about 20 bricks into jig as it passes his station, blending colours in accordance with customers' requirements

One man can easily strap 150 packs of 100 bricks an hour. Continuous strips of paper 3-in. wide are positioned at corners of packages to protect brick against chipping and to bind packages together for fork truck handling

Fork truck with special double set of twin-prong steel forks removes six packs of 100 bricks. The packs are taken to storage or can be loaded directly to trucks for delivery to the distributor, or directly to the job site

At the job site, large units of bricks are broken down into individual strapped packages of 100 bricks and moved by hand truck to bricklayers

ciency of bricklayers and reduction in broken and chipped bricks.

At the job site, three 100-brick packs can be lifted to the building floor, and then delivered by two-wheel cart to the exact location desired by the bricklayers. A load of 10,000 bricks can be unloaded and delivered to the building floor in about an hour, compared with a minimum of three hours for two men just to unload the same number of unstrapped bricks by hand.

Speed of the machine can be controlled to meet brick plant output, from a maximum output of 120,000 bricks in an eight-hour day down to a minimum of 20,000.

The System

The Link-Belt/Acme Steel brick packaging and strapping machine includes a conveyor fitted with jigs or package-forming frames. The machine has an ejecting ram mechanism for removing bricks from jigs and compressing them for strapping, together with Acme strapping equipment and gravity conveyors. A series of work stations is set up on one side of the conveyor, or around the entire periphery if desired.

The entire mechanism is designed for continuous production, utilizing intermittent conveyor movement as the cycling medium. The conveyor is hydraulically operated and advances one jig spacing with each cycle. This positions the jigs in front of work stations and moves one jig to the ejector station at the consolidating chute, for ejection of a completely stacked pack.

Bricks are delivered directly to the packaging area in kiln cubes of 400 to 500 bricks. These can be placed on the ground near the brick sorters or on feeder tables that serve the sorters at hip level.

Feeder tables can be fitted with conveyors for greater mechanical control.

As the conveyor jigs come to a stop at each work station, the stacker sets approximately 20 bricks in the jigs. Thus a full pack of 100 bricks is completed at the fifth station. The five stackers blend various shades of brick into each pack and also cull rejects.

A slider belt conveyor for rejects can be installed directly under the feeder tables or positioned within the oval of the packaging machine. The stackers can quickly discard into this belt batts for discharge to a yard truck and commons to a hand-stack position.

The consolidating chute which receives the stacked packages has a roller bed bottom and one vertical side which is fitted with brick compressing members. It is not necessary for the steel strapping to compensate for loose stacking. All straps are applied to a uniform, predetermined tension. Quality packages, tightly strapped and stable, are consistently obtained.

The strapping operator inserts the strap into an Acme automatic strap feed unit that power-feeds the strap in a track completely around the stacked brick. As the end of the strap emerges on the operator's side of the stack, the operator threads it into a fully powered pneumatic tool which tensions, seals and shears the band.

Protection Against Chipping

Paper-feeding reels with self-centering paper guides automatically feed four bands of paper and position them at the upper and lower corners of the packages to protect against chipping and to bind the packages together in convenient units for conveyance by fork-lift truck.

The Link-Belt/Acme Steel brick packaging and strapping machine can also be installed to receive kiln cubes directly from either periodic or tunnel kilns. By changing the path of the conveyor, the machine can also package or strap bricks directly from tunnel kiln cars.

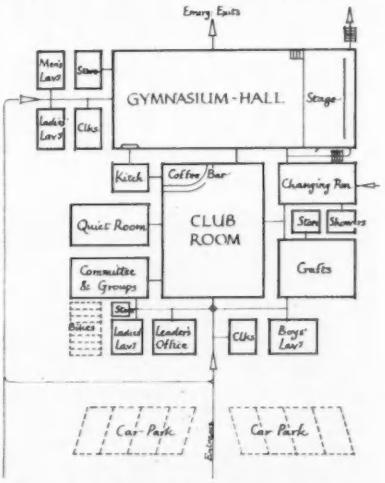
Boys' Clubs

Advice on their Siting and Planning

ADVICE AND INFORMATION for those who propose to set up or to construct a boys' club is contained in a pamphlet, 'Building Boys' Clubs,' published recently by the National Association of Boys' Clubs. Aside from administrative data—sponsors, resources, money-raising, maintenance and leadership—there is much information about the choice of site, planning approvals, accommodation requirements, and the importance of the architect's brief.

On the location of the site the pamphlet states that it should be reasonably accessible to the area from which boys are likely to be drawn and in a central position, so that it may be conveniently used by other organisations. Suggested locations include a site in a corner of an established recreation ground or playing field, adjacent to a community centre, or next to a school. Influencing factors include the noise nuisance, accessibility to playing fields, services and condition of the site. Another important question is to ascertain from the appropriate authority that the site has not been zoned for industrial or other residential purposes. Provision for future extension should also be considered and a hard surface for outdoor activity would be useful.

When considering the plan, amount and type of accommodation required the layout of the rooms should directly be related to the activities of the club and the general way it is to be organised. In particular there are such questions as (a) whether the whole scheme is to be carried out in one initial operation or



left for future extension; (b) provision of a gymnasium; (c) and whether it will be required for drama and such indoor sports as badminton, or for use by the public or sub-letting to other organisations; (d) hobbies and craft rooms; (e) lock-up storage for tools, materials and uncompleted work; (f) arrangement for supervision; (g) the provision of changing rooms with showers and hanging space for coats, etc.; (h) the provision of a cycle shed or car park; and (i) the method of heating.

Glass Factory Extension at Doncaster

Successful Co-ordination of the Design and Construction Programme

WORK is nearing completion on the extension which has been built by Holland & Hannen and Cubitts (North West) Ltd. at Kirk Sandall, Doncaster, for Pilkington Brothers Ltd. The extension consists of four buildings: a grinding and polishing shop, a sand grader building, a rouge plant building and a storage building.

Close co-operation from the inception of the project between the central engineering department of Pilkington Brothers Ltd., Cubitts, the consulting engineers, A. J. & J. D. Harris of London and the architect, Mr. Gerald R. Smith, ARIBA, of Larne, Northern Ireland, has played a major part in a 12-month saving in construction time. The contract figure was £800,000.

After Pilkingtons had established their production requirements and determined the shape and size of the extensions, they called in Cubitts and the consulting engineers, who were asked to design the special superstructure. They worked in close liaison with the architect who produced the essential layout, services and elevational treatment. Work started on the site in May, 1959, and since then regular meetings between the four parties have plotted future work.

The contract was also speeded up because the superstructures of the buildings were assembled from nearly 2,000 prefabricated concrete units—columns, beams, floor units, etc.—weighing over 6,000 tons which were transported 220 miles by road from the manufacturers, Concrete Development Co. Ltd. at Iver, Buckinghamshire. After delivery on the site the various units were simply swung into position and erected very rapidly.

An interesting problem was the construction of a machinery deck to carry heavy loading at 18½ ft. above ground level. It had to be entirely independent of the main structure yet provide maximum rigidity. This was achieved by providing a separate reinforced in situ concrete frame structure resting on independent piles with an in situ concrete suspended slab floor. The outer sides of this floor were connected to the main structure by precast concrete floor beams resting on the edge of the floor and supported by a precast concrete edge beam connected to the main columns.

Interior of the 950 ft. long storage building. The clean appearance of the main structural members was obtained by the use of white cement in the concrete mix

The largest of the four buildings is the grinding and polishing shop, housing the machinery for grinding and polishing plate glass. It is 950 ft. long, has a 60 ft. clear span and is 55 ft. high. This building in common with the other three is carried on 17 in. diameter medium driven piles.

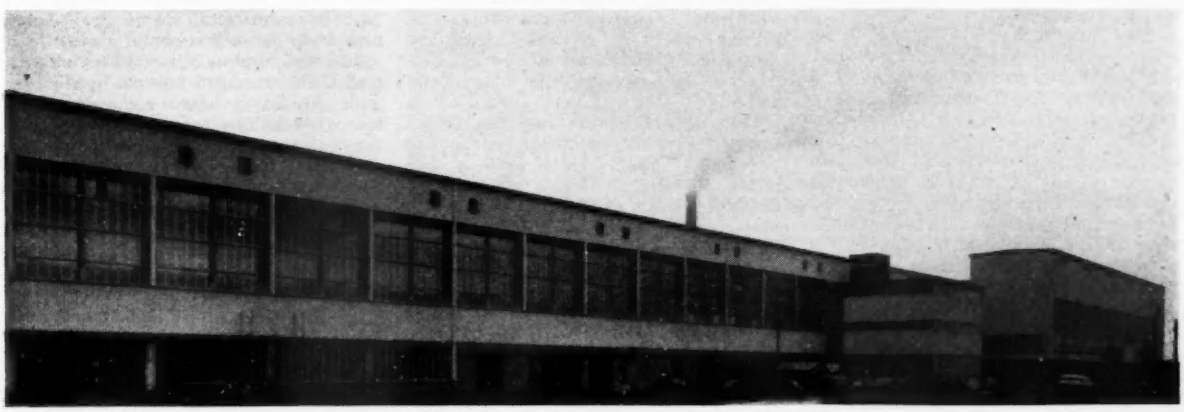
A machine over 700 ft. long is mounted on a deck 18 ft. 6 in. above ground level. This deck is a rigid in situ reinforced concrete structure on its own piled base, independent of the superstructure.

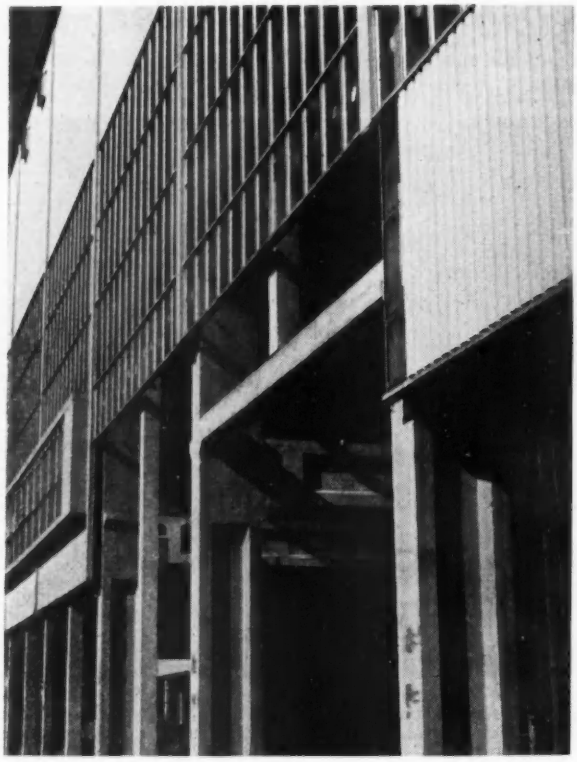
The superstructure supports the cladding, 25-ton and 14-ton gantry cranes and the outside edge of the working deck. Main frames are at 25 ft. spacing with a double column and expansion joint half way in the length. The 40 pretensioned prestressed concrete roof beams are each 68 ft. long and weigh 8½ tons and the 80 reinforced concrete columns are each 58 ft. long and weigh 17½ tons. Purlins and eaves beams are also in pretensioned. prestressed concrete. The mullions and edge beams are in reinforced concrete.

Deck units spanning from the machinery bed to the edge beams are in pretensioned, prestressed concrete using strand tendons and are designed to take standard Ministry of Transport bridge loading. The choice of structural and cladding materials has been influenced by conditions of high humidity.

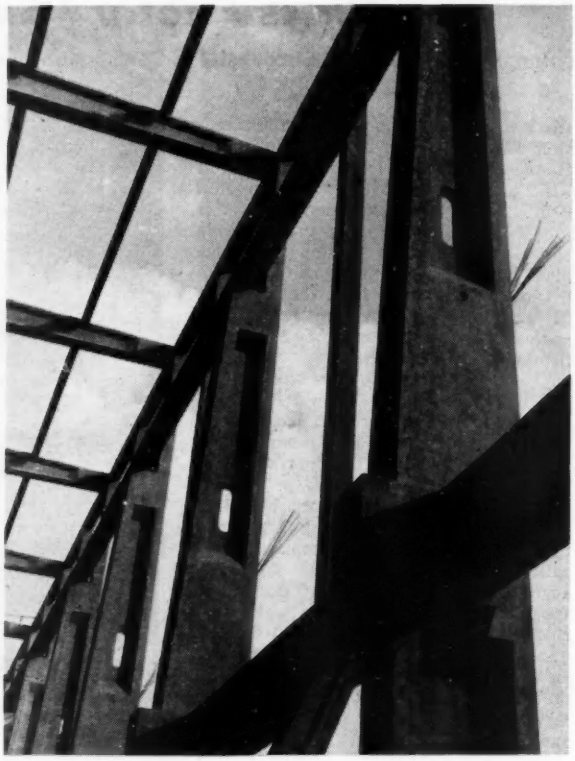
The metal-decked roof is finished with

The grinding and polishing shop linked with the small rouge plant and the sand grader building on the right





Details of sheeting and glazing in the sand grader building



Structural assembly details in the grinding and polishing shop

1¼ in. insulation board, ¾ in. Fibreglass and single layer mineralised felt. Gutters are formed as part of the roof and pitch fibre downpipes are housed internally.

Cladding consists of metal panelling with grey coloured Galbestos exterior and aluminium patent glazing. The patent glazing and cladding is fixed to 6 in. x 6 in. aluminium cladding rails. The rails are attached to the main and intermediate columns by aluminium cleats. Weep holes are provided to release condensation which may occur on the inside of the glass.

The sand grader building for the grading and distribution of sand for the grinding process is 275 ft. long, 40 ft. wide and 65 ft. high. At 18 ft. above ground level, the building is partly floored for central equipment and offices.

The main floor, 30 ft. above ground level, is in situ prestressed concrete slab continuous over 11 spans of 25 ft. Designed for a superimposed load of 450 lb. per sq. ft., the slab is 18 in. thick over the main beams, reducing to 10 in. at midspan. Sufficient mild steel reinforcement was provided to enable the shuttering to the structure to be struck prior to prestressing. Stressing cables were 12/276 Freyssinet in pairs at 3 ft. centres and are 275 ft. long. Stressing was carried out after completion of concreting. As with the main building, main frames are at 25 ft. spacing. The superstructure also supports a five-ton gantry crane.

Roof beams are 40 ft. long in pretensioned, prestressed concrete. The moulds for these were made by cutting down the moulds for the main building roof beams. Purlins and eaves beams are of the same type as used in the main building and mullions are also similar. Main floor beams —36 ft. span and 6 ft. deep weighing 12 tons—were prestressed with one Freyssinet 12/276 cable for transport and, after being placed in position between columns, were threaded with five 12/276 cables and stressed to tie together.

The Amenity Suite

Windows to the amenity suite, which houses offices, are aluminium framed and are fixed to aluminium cladding rails. The windows project 2 ft. to allow convector heaters and cupboards to be installed in the recesses. Vitrolite, plaster and plaster paint finishes are used on the brickwork divisions of the amenity suite. Joinery work is generally hardwood throughout. Floors are of red adamantine tiles and terrazzo tiles in lavatories and mess rooms with lino tiles elsewhere.

Ceilings are of the suspended type, using Fibreglass acoustic panels and Asbestolux. Heating in the amenity suite is low pressure hot water, with convector type heaters under the windows and pressed steel type radiators elsewhere. The second floor of the building housing grader equipment, is separated from the main building by a glazed metal screen.

Floor finishes are generally granolithic throughout. Internal walls are of brick, flush pointed and left undecorated. A brick dado wall 4 ft. 6 in. high is provided to external walls. The first floor is at the same level as the working deck of the main building and connections to the second floor and ground floors are by steel access stairs.

All structural units of the storage building, which is 950 ft. long and 50 ft. wide and 30 ft. high, have been cast in concrete made with white cement to give a lighter and cleaner appearance. Units were coated with a silicone solution before leaving the works to enable marks made during erection to be washed off.

The building contains two gantry cranes of 14-ton capacity. The 54 ft. long roof beams are similar to those for the main building but are of lighter construction. Frames are spaced at 25 ft. and purlins and eaves beams are similar to those of the main building. Columns are in reinforced concrete. Cladding to the side walls is carried on concrete channel section (10 in. by 7½ in.) sheeting rails spanning 24 ft. between columns.

The roof consists of metal decking with grey Galbestos soffit, finished with Fibreglass, insulation board and mineralised felt. The gutters are formed as part of the roof and pitch fibre pipes are used as rainwater pipes, fitted externally. The roof junction between the main building and the storage building is a gutter 2 ft. 6 in. wide finished in asphalt. Roof lights are placed adjacent to the main building to give lighting to the gangway over which the overhead crane works.

The building is clad in brickwork to a height of approximately 9 ft. 6 in. above which is aluminium patent glazing, which is fixed by timber battens attached to the concrete sheeting rails. Floors are concrete with granolithic finish.

'Accident Prevention on Site'

Lively Broadcast Discussion by Builders and a Safety Officer

AN INFORMAL DISCUSSION between Mr. J. Mills, president of the National Federation of Building Trades Operatives, Mr. John Hayward, of the London Accident Prevention Council, Mr. Charles Crichton and Mr. K. J. Pearce, FIOB, was the feature of a programme transmitted by the BBC in its 'Building Matters' series in Network Three on November 29. Following are some of the main points from the discussion for which the subject was 'Accident Prevention on Site.'

CRICHTON: In the building industry the accident rate is high. Hayward, you've got some figures to show what it's been over the past two years.

HAYWARD: During 1959 there were 15,410 notifiable accidents, 169 of which were fatal; but during the present year the figures have been so much worse—up to the end of September, the comparable figure was 13,320 notifiable, 165 of which were fatal.

MILLS: In the building industry one and a quarter million man hours are lost every year as a result of industrial disputes. Eighty-seven per cent of the accidents are due to falls of either operatives or materials.

PEARCE: I think we want to get that quite clear, Crichton, that this eighty-seven per cent is not just the falls of operatives, it does also include the falls of materials from scaffolds, etc., on to the operatives.

CRICHTON: What in your opinion is the underlying cause of these accidents?

HAYWARD: I would say that much of it must be laid at the door of general untidiness. People are tripping over, guard rails are left from scaffolds, toe-boards are left off.

PEARCE: Not only untidiness on the site but untidiness of mind of the individual who doesn't take the trouble to put things back in the right place.

CRICHTON: Do these accidents happen more on the large building site than on the small, or are they evenly spread?

HAYWARD: I think that in the main they occur more on the smaller sites than the larger ones.

Better Organisation

PEARCE: Undoubtedly the larger sites can be organised a little better; it is all new work or most of it is new work, whereas on the medium and smaller sites the builder comes up against much more difficult problems where the risks are greater. Quite a lot of accidents do happen on the medium and smaller sites.

CRICHTON: In fact what this boils down to is that the medium and smaller sites have got to take a lot more care to prevent accidents happening.

MILLS: You can't compare the building industry with the motor industry, for instance, where people work under better conditions. I believe that the weather is a contributing factor to accidents in building.

CRICHTON: Is there any indication that the weather we've been having over the last six to nine months, has had any effect on the accident rate?

HAYWARD: That is shown in the figures already given and I think it is also interesting that the accident rate for 1958 was much higher than the preceding years, and remember the dreadful weather we had during that summer.

PEARCE: I wonder as a practical builder, Crichton, whether that in fact is so. I wouldn't have thought it was myself but I'm out to be convinced.

HAYWARD: Well, no man if he is working when he is wet, cold and tired is likely to give as much thought to his safety as he would do if he were warm and happy.

PEARCE: There is no doubt at all that if you get rain the ladders and boards, scaffolding generally, the roofs on which you work all become more slippery and of course are more dangerous. It is amazing how many people expect builders to work under such conditions.

Effect of Regulations

CRICHTON: Nevertheless, I should have thought with the regulations that are in force, that the accident rate would have tended to go down.

MILLS: The regulations have been in force since October, 1948—twelve years.

CRICHTON: And in twelve years the accident rate has continued to go up.

HAYWARD: Experience shows that in other industries for some years after the introduction of the regulations there has appeared to be an increase in the number of accidents. I think that this may well be due to the fact that more people are conscious of the fact that they have to report these accidents.

MILLS: I think it's important to note, Crichton, that at the moment, under active consideration, there is a revised code of safety, health and welfare regulations and the National Federation of Building Trades Operatives through its legal department, is giving very serious consideration to all the clauses and is in fact not at all satisfied with the present draft code.

HAYWARD: But surely the new regulations embody practically the whole of the existing regulations with a few additions, and those additions have been added mainly to cover the civil engineering side. There hasn't been any great alteration to the basic regulations as such.

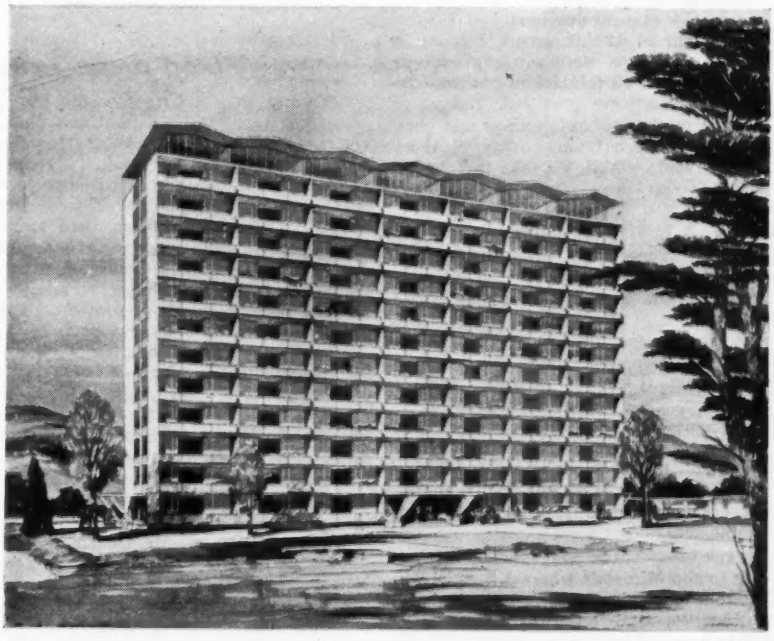
MILLS: That is our point. The code has been extended, as you say, to cover the civil engineering industry, when in fact the whole code should be amended and made more comprehensive.

CRICHTON: Mills, do you feel that the regulations should be tighter, that they should be more imposing?

MILLS: Yes.

HAYWARD: Does the industry know the regulations? There were 1,047 notifiable ladder accidents alone during 1959. If the elementary principles were carried out, the provision of guard rails, toe-boards, making sure that the spans are not excessive, that scaffolds are well built of suitable material, the accidents could in the main be prevented.

CRICHTON: Are these regulations being



A proposed apartment building in Ottawa, Ontario, Canada. The American Finance Corporation will probably finance the project which will cost approximately $3m. The architect is Mr. P. J. E. Fordham, ARIBA

largely ignored on building sites?

MILLS: Very loosely applied, let's put it like that.

HAYWARD: I don't agree. Let us be quite honest. Go round any large city these days and compare the condition of scaffolding now as it was eight years ago, and I think on most of the larger sites anyway, you'll see that a real attempt is being made to conform to the regulations.

PEARCE: I think that does apply to the larger sites certainly but I think some of the medium and smaller sized firms have got to do a lot more thinking about accident prevention. You do see things which make you hold your breath for fear that something's going to happen.

Wearing of Helmets

CRICHTON: What about things like wearing of helmets—is the wearing of helmets compulsory these days?

HAYWARD: No, it is not compulsory. More and more helmets are being worn but one must remember that with helmets, even though an employer supplies them, this does not relieve him of his responsibilities, under the regulations, to prevent materials from falling.

CRICHTON: Hayward, can you give some examples of the stupidity of the man on the site?

HAYWARD: I recently visited one of our large sites and saw a chap working on an asbestos roof without using a crawling board. I called him down and asked him if he realised the dangers. He showed me his arm and he said 'Look at that—I once went through a roof and my brother was killed.' I said: 'Well, I thought you'd have learned the lesson.' I went on the same job the following day, and I saw the same man working on another fragile roof—I called him down and he said: 'Good God, I thought you'd gone back to London.' Only last week I was in the Manchester area and I went to a height of 180 ft. where I found a number of joiners were working without any attempt at all to place in position the boards which were provided, and when I spoke to them about it they said they had got to earn bonus. One of them actually said: 'Well, I'll take my chance with the rest.'

A Twofold Responsibility

MILLS: There is a twofold responsibility for accidents—all the blame cannot be laid at the door of the employer, the operative also has a responsibility. In the first place he should use the equipment provided for him and observe the regulations as far as possible, and, if necessary, insist upon the provision of equipment and safe working conditions. Just as an employer is liable to prosecution about breaches of the regulations, so should an operative be who endangers the life of himself or any of his colleagues on the job.

HAYWARD: There has recently been a case in the Midlands where a firm, prosecuted for breach of regulations, had the prosecution transferred to some bricklayers who stated in court that they were so anxious to earn bonus they had no time to bother about the guard rails and toe boards. The prosecution was withdrawn from the employer and the two bricklayers concerned were fined.

PEARCE: I am certainly in favour of an employer playing his part but I do feel that it is more necessary for the operative to have the right frame of mind. So often when you go on the site and point things out which are not right you rather get the feeling that the operative thinks you're making a lot of fuss about nothing. He ignores what you tell him and you get a certain amount of silent contempt.

CRICHTON: But if this is so, surely there must be something wrong with the method of training and education.

HAYWARD: There are courses being run for the training of foremen in accident prevention at places like Enfield, Birmingham and Liverpool, where the emphasis is on practical work.

MILLS: Our great difficulty is getting down to the operative on the site, and I would like to know some method that we can arrive at to get right down to that.

Value of Site Visits

HAYWARD: I think the trade unions, of course, are only scratching the surface in this—there's only one summer school a year. With forty or fifty people present from a membership of nearly two hundred thousand it's not likely to make much impression. I think that perhaps employer and operative or trades unions representatives should get together and organise sites safety meetings during working hours, show films, and have discussions. I am quite satisfied that doing something like that will be quite effective, in fact we've tried it out and it has been quite effective on our sites.

PEARCE: But that surely is happening already. Employers in the south of England, Yorkshire, and in London have in fact got committees which discuss and work on accident prevention, and there are many joint committees running already. Some of the courses at these training centres have been attended and run solely for trade union members. One other thing, and that is, of course, to start the training right down at the bottom shall we say and that is with apprentices, when they come into the industry, and also with general foremen on their special courses.

MILLS: In the curriculum of the City and Guilds now in each of the separate trades there is an accident prevention examination.

CRICHTON: It seems to me that what is really needed is the attack on the site.

PEARCE: Surely accident prevention must be part of our normal business operation; we must all develop a sense of responsibility, particularly management. I know it requires a lot of persistence but I think if one can go on and on and on setting an example, then eventually we will achieve some results.

HAYWARD: I think there is a tendency to over emphasise the cost of accident prevention.

Meeting the Cost

CRICHTON: At the same time it is very difficult sometimes to take in this cost at the estimating stage, wouldn't you agree?

PEARCE: Yes I would. I think sometimes an inclusion is made in the bill of contents for the larger jobs for steps to be taken for accident prevention. I know it may be said that that's already included in the preliminaries now, but it's very difficult to get it over, you know, and to make the public realise that they have got to pay a little bit more if we have got to take these steps.

CRICHTON: What it all boils down to in the long run is that we all have a personal responsibility in this matter.

Fixed-price Tenders at Portsmouth

City Council Unwilling to Change Policy

PORTSMOUTH BUILDERS' ASSOCIATION has been told by the City Council's Health and Housing Committee that it is not willing to reconsider its policy of fixed price tenders. The Association had complained of delays in accepting tenders; of delays in fixing starting dates; of incomplete details at the time of tendering; of delays in the supply of drawings; and of an excessive number of variations.

In replying to the Association's request, the Deputy City Architect, MR. J. V. QUARMBY, wrote that contractors were told at the earliest possible moment when their tenders had been accepted. It normally took between five and ten weeks, he said, to obtain Ministerial consent.

Referring to the period of two months in which the Corporation has the right to accept the tender, Mr. Quarmby said: 'That period was stipulated by the National Federation of Builders. Before, the Corporation always adopted three months.' Mr. Quarmby added that starting dates were always fixed by the builders themselves. Since the introduction of fixed price tendering, the City Architect had never received a complaint from a contractor about incomplete details at the time of tendering. While changes of policy did affect changes in drawings, this was infrequent, and the number of variations was kept to the minimum.

During a discussion, the Health and Housing committee was told by the Assistant Town Clerk, MR. R. A. NEAVE: 'The Association is asking for the fluctuation conditions to be reintroduced. This matter has recently been a subject of much discussion, and it is probable that the Finance Committee will be asked to review the policy laid down in September, 1957.'

Cement- or Lime-Stabilised Soil

THE DETERMINATION of the cement or lime content of cement- or lime-stabilised soil is the subject of 'Road Note' number 28, prepared by the Road Research Laboratory and published for the DSIR by HM Stationery Office (price 1s.). The Note describes recommended procedure by the EDTA and flame photometer methods, giving the apparatus calculations required in each case.

THE BUILDER LONDON MEASURED RATES

These prices for new building work in London normally appear in the first issue of each month only. The prices are inclusive of all allowances for National Insurance, Holidays with Pay and Public Holidays, Third Party Risk, Travelling Allowances and Guaranteed Week. They cover a profit of 10 per cent on the prime cost without any addition for establishment charges.

These rates do not include for Foremen and other preliminary items, such as office, sheds, plant and scaffolding, etc., and these must be added accordingly.

The basic cost of the labour and materials used in arriving at the rates has been derived from the 'Current Prices of Materials' published in *The Builder*.

The data given are copyright. While every endeavour is made to ensure accuracy, we do not hold ourselves responsible for any error that may occur.—EDITOR.

EXCAVATOR

All hand labour	*Per yd. cube*				
	Loose earth	*Firm soil*	*Stiff clay*	*Chalk and flints*	*Rock, etc., no blasting*
	s. d.	s. d.	s. d.	s. d.	s. d.
Surface excavation to shallow depths	8 3	10 3	11 9	17 10	46 0
Bulk do. or large trenches, etc., not exceeding 5 ft. deep	7 6	9 4	10 9	15 10	42 0
Trenches do. under 4 ft. 6 in. wide and do.	10 0	12 1	14 0	20 8	55 0
Pier holes and similar under 6 ft. square and do.	11 3	13 10	16 2	23 9	61 6
Additional throw for every 5 ft.:					
Bulk excavation	3 9	3 9	5 5	5 5	6 2
Trench ,,	5 0	5 0	6 8	6 8	7 8
Pier ,,	5 7	5 7	7 6	7 6	8 6
Return, fill and ram	5 2	5 2	6 8	6 8	8 2
Wheeling surplus n.e. 100 yds. run and depositing	7 2	8 0	8 0	8 0	9 0
Underpinning in trenches	13 4	18 6	21 6	30 9	—

	s. d.
Loading lorries and transporting to tip ... ... Yd. cube	16 5
Basketing out and depositing ... ... ,,	10 0
Planking and strutting to sides of surface or basement trenches :	
Depth up to 5 ft. ... ... Ft. sup.	6
,, ,, 10 ft. ... ... ,,	8
,, ,, 15 ft. ... ... ,,	9
Hardcore :	
Filled-in layers and consolidated ... ... Yd. cube	22 3
do. 4 in. thick ... ... Yd. sup.	3 3
do. 6 in. thick ... ... ,,	4 4

CONCRETER

	Basic yard cube rates			
	1 : 12	1:3:6	1:2:4	1:1½:3
Aggregate	1½ in. all-in	1½ in.	¾ in.	½ in.
	s. d.	s. d.	s. d.	s. d.
Concrete in normal foundations : (minimum 6-ton cement loads)—				
Portland cement standard specification	66 6	74 6	81 8	85 10
Portland cement rapid hardening	67 9	76 4	84 2	89 2
Water-repellent cement	70 6	80 3	89 11	96 4

	s. d.
Add to above basis for :	
4 in. surface beds ... ... Yd. sup.	7½
6 in. ,, ,, ... ,,	8½
(If above two items worked around mesh reinforcement, add 5d. per yd. *super.*)	
Foundations in underpinning in short lengths ... ... Yd. cube	16 4
Beds and flaunchings to drains ... ... ,,	8 2
Pier or stanchion foundations—small ... ... ,,	4 1
Sundry small items not exceeding 3 ft. cube in plinths, curbs, padstones, etc. ... ... ,,	21 6

REINFORCED CONCRETE

ADD to above 'Basic Yard Cube Rates'

Reinforced concrete including working around reinforcement between formwork and hoisting to normal levels :	s. d.
Foundations and similar ... ... Yd. cube	5 5
Isolated stanchion or pier bases ... ... ,,	6 5
walls not exceeding 6 in. thick ... ... ,,	26 8
,, ,, ,, 12 in. ,, ... ,,	18 8
Suspended floors or flat roofs 4½ in. thick ... ... Yd. cube	21 6
,, ,, ,, ,, 6 in. ,, ... ,,	17 5
,, ,, ,, ,, 9 in. ,, ... ,,	14 10
(Beams attached to floors or flats, *add* 6/8 yd. cube)	
Isolated beams or lintels average 72 sectional inches ... ,,	32 3
Do. average 144 sectional inches ... ... ,,	24 1
Columns or stanchions average 72 sectional inches ,,	37 8
,, ,, ,, ,, 144 ,, ,, ,,	29 5
Staircases and landings, etc. ... ... ,,	56 1
Shell roofs average 3 in. thick, including labour forming curved surface ... ... ,,	133 3
Hollow tile floors :	
Hollow clay tiles 4 in. thick with 1 : 2 : 4 concrete ribs at 14 in. centres with filler tiles and 1½ in. fine concrete screed (excluding reinforcement and form work) ... ... Yd. sup.	19 4
All as above but 6 in. thick clay tiles ... ... ,,	23 5
,, ,, ,, ,, 9 in. ,, ,, ,, ... ,,	32 7
Sundry items :	
2 in. concrete (1 : 2 : 4) blinding bed ... ... Yd. sup.	5 0
Spade finish to concrete beds ... ... ,,	10
Trowel ,, ,, ,, ... ,,	1 10
Laying to falls and currents ... ... ,,	1 0
Hacking concrete by hand ... ... ,,	2 8
Hacking concrete by use of proprietary liquids ... ,,	1 7
Damp-proof membrane in three coats with sanded key ... ... ,,	4 10
¾ in. Bitumen expansion joints 4 in. deep in floors ... Yd. run	3 11

	Mild steel rods (round) cut, bent, hooked, wired and fixed complete (Ex. London Stock)			
	¼ in.	⅜ in.	½ in.	⅝ to 1 in.
Reinforcement :	s. d.	s. d.	s. d.	s. d.
Floors beams laid in only ...	88 6	79 4	73 8	70 3
,, ,, ,, wired into frames	100 7	90 0	85 10	80 3
Walls wired into frames	100 7	90 0	85 10	80 3
Columns wired into frames ...	100 7	90 0	85 10	80 3
Staircases wired into frames ...	102 11	92 4	88 2	82 7

	s. d.
Steel mesh fabric reinforcement :	
Laid in floors including laps and straight cutting and wiring, etc. :	
Weight 3·94 lb. per yd. sup. ... ... Yd. sup.	4 3
,, 4·71 lb. ,, ,, ,, ... ,,	4 6
,, 9·32 lb. ,, ,, ,, ... ,,	8 4
Raking cutting worth 6 in. material cost per ft. run	
Circular cutting worth 9 in. material cost per ft. run.	
Formwork (Sawn) including strutting, easing and removal and average four times use of timber :	
Soffit of floors and flat roofs ... ... Yd. sup.	16 9
Sloping soffits of stairs ... ... ,,	22 10
Barrel-vault soffits of floors and roofs ... ... ,,	21 4
Vertical sides of walls ... ... ,,	16 0
Battering sides of walls ... ... ,,	20 10
Columns ... ... Ft. sup.	2 5
Lintels and beams ... ... ,,	2 7
Staircase strings cut to tread and riser ... ... Ft. run	3 7
Edges of concrete floors, etc., up to 12 in. deep per inch in height ... ... ,,	2¼
Rebates or similar per inch girth up to 6 in. girth ... ,,	2½
Raking cutting ... ... ,,	8½
Extra cost for wrought shuttering and labour rubbing down to leave fair face on concrete ... Yd. sup.	2 7
Pre-cast Concrete (1 : 2 : 4) *including fair face :*	
4½ in. x 6 in. reinforced lintels ... ... Ft. run	3 0
9 in. x 6 in. ,, ,, ... ,,	5 3
9 in. x 9 in. ,, ,, ... ,,	8 7
Steel Formwork :	
Steel shuttering forms with patent expanding floor centres and telescopic props not less than four times use on each job with continuous use ... Yd. sup.	11 6

Partitions : (*Minimum 100 yd. super*)	*Yd. super rate* 2 *in.*	3 *in.*	4 *in.*	6 *in.*
	s. d.	s. d.	s. d.	s. d.
Clinker concrete slab partitions in cement mortar	9 8	12 2	14 2	—
Cranham terra cotta slab partitions in cement mortar	14 1	17 0	20 0	—
Moler partition block partitions in cement mortar	19 10	23 0	25 11	—
Thermalite-Ytong partition blocks in cement mortar	—	15 8	19 4	27 7

Cuttings :

Raking cutting and waste = $\frac{1}{3}$ of ft. sup. rate
Circular ,, ,, ,, = $\frac{1}{3}$ of ft. sup. rate
Cutting around openings = $\frac{1}{6}$ of ft. sup. rate
Cutting and bonding at angles, intersections and ends all at 6d. ft. run.

BRICKLAYER

	Yd. super rates *Plain flettons*	*Rough stocks*	*Second stocks*	*Blue wire-cuts*
	s. d.	s. d.	s. d.	s. d.
Brickwork in cement mortar (1 : 3) reduced to one brick thick	38 5	51 8	61 4	92 4
Deduct if in 1 : 1 : 6 cement-lime mortar	10	10	10	10
Add if in :				
Filling in openings	5 8	5 8	5 11	7 2
Backing to masonry	2 10	2 10	3 0	3 8
Building overhand	1 10	1 10	1 11	2 2
Raising on existing work	2 10	2 10	3 0	3 8
Circular on plan to quick sweep ...	5 6	5 6	5 9	6 10
Small detached piers, plinths, etc.	8 4	8 4	8 9	10 5
Underpinning	5 6	5 6	5 10	6 11
Brick-on-edge walls	13 2	18 2	21 2	—
Half-brick sleeper walls honeycombed	13 9	18 7	—	—
Half-brick walls	21 6	29 3	33 11	50 8
do. with fair face and pointing both sides as work proceeds	24 8	—	37 3	54 6
One-brick wall with fair face and pointing both sides as work proceeds	43 8	—	66 4	98 2
11 in. cavity brick wall with two half-brick skins with 2 in. cavity and three galvanised iron twisted ties to every yd. sup.	46 3	—	71 2	—

Sundry items :		s. d.
Horizontal double slate damp-proof course ...	Ft. sup.	3 4
Vertical ,, ,, ,, ,, ...	,,	4 1
Hessian-base bitumen damp-proof course	,,	1 6
Levelling and preparing for raising on	,,	1 0½
Cutting, toothing and bonding new to old	,,	3 8
Wedging and pinning with slates in underpinning ...	,,	5 2
Rough cutting	,,	6
Cutting and fitting brickwork around steel	,,	6
Bed and point frame one side	Ft. run	4
Rough cutting squint or birdsmouth	,,	6½
Labour plumbing angles on faced work	,,	2½
Rake out and point to lead flashing	,,	7½
,, ,, ,, ,, stepped flashing	,,	10½
Cutting groove for skirting and point	,,	1 7
Shallow chases for small pipes and conduit	,,	1 9
Metal reinforcement 24 gauge 2½ in. wide	,,	4½
Faced work : (*Flemish bond*) :		
Add or deduct for every 10s. per 1,000 difference from basic price of common bricks in Flemish bond in solid work	Yd. sup.	9
do. to half-brick wall in stretcher bond	,,	6½
Add for extra labour to each side in facings and pointing as work proceeds	,,	3 2
do. butt joints raked out and pointed with special mortar	,,	6 3
If built in English bond, add 12½ per cent to above items.		
Labours :		
Fair cutting	Ft. run	1 1½
Fair circular cutting	,,	1 4
Fair squint or birdsmouth cutting	,,	1 9

Copings :		9 *in. wall* s. d.	14 *in. wall* s. d.
Brick-on-edge coping in flettons finished fair and pointing as work proceeds ...	Ft. run	2 5	3 3
Add for every increase by 10s. per 1,000 in cost of superior bricks	,,	1	1½
Add for two courses of roofing tiles under and cement weather fillets on both sides	,,	3 7	4 4
Cills :			
Two courses of roofing tiles laid breaking joint in cement mortar, set weathering and pointing ...	Ft. run	3 7	
Arches :			
Extra over fletton brickwork for brick-on-end flat arch 4½ in. on soffit and 9 in. high in facings p.c. 350s. per 1,000 and pointing	Ft. run	3 7	
Extra over fletton brickwork for fair axed arch in stock facings p.c. 350s. per 1,000 and pointing (cuttings measured separately)	Ft. sup.	9 3	

CURTAIN WALLING

Curtain walling of hollow, extruded, aluminium alloy mullion and transom units fixed together to form a grid to conventional steel and concrete framework, including glazing complete and a reasonably priced infilling panel and subject to the number of vents, etc., required, a fair average price is from 22/- to 27/6 per ft. sup.

PAVIOR

	Yd. super rates $\frac{1}{2}$ *in.*	$\frac{3}{4}$ *in.*	1 *in.*	1$\frac{1}{4}$ *in.*
	s. d.	s. d.	s. d.	s. d.
Cement screed (1 : 3) to receive pavings	4 5	5 3	6 1	6 11

		d.
Add to above for :		
Trowelling smooth	Yd. sup.	7
Narrow widths or small quantities—add 25 per cent. to plain surfaces : Laying to falls	,,	4

	Yd. super rates 1 *in.*	1$\frac{1}{4}$ *in.*	1$\frac{1}{2}$ *in.*	2 *in.*
	s. d.	s. d.	s. d.	s. d.
Granolithic paving (1 : 2½) laid on concrete	8 9	9 11	12 0	13 2

Add to above for :

		s. d.
Narrow widths or small quantities—add 25 per cent to plain surfaces.		
Surface hardening with three coats of silicate of soda	Yd. sup.	1 5
Carborundum finish with 2 lb. per yd. sup. trowelled in	,,	3 0
¾ in. skirting 5 in. high covered at bottom and fair top edge	Ft. run	2 9
Mitres and ends—7d. each.		
Composition flooring ½ in. thick	Yd. sup.	18 0
Terrazzo paving ⅝ in. thick	,,	45 0
Rubber flooring ¼ in. thick	,,	65 0

ASPHALTER

		Mastic BSS 988 s. d.	*Natural rock BSS 1162* s. d.
Asphalt roofing :			
¾ in. flat to falls in two thicknesses on felt underlay on prepared screed	Yd. sup.	14 3	20 0
do. in small quantities or narrow widths	Ft. sup.	2 0	2 9
6 in. high skirting with angle fillet and splayed edge at top	Ft. run	2 7	3 0
External angles on do.	No.	7	7
Internal angles on do.	,,	7	7

		Mastic BSS 1097 s. d.	*Natural rock BSS 1418* s. d.
Asphalt Damp-proof Course and Tanking :			
Vertical damp-proof course in 2 thicknesses	Yd. sup.	21 0	27 0
do. in narrow widths	Ft. sup.	2 6	3 4
¾ in. Horizontal damp-proof course in two thicknesses	Yd. sup.	14 4	19 9
do. in narrow widths	Ft. sup.	1 10	2 6
Vertical tanking in three thicknesses ...	Yd. sup.	25 0	31 4
1¼ in. Horizontal do. in three thicknesses	,,	19 3	29 2
Labour double angle fillet	Ft. run	1 4	1 4

DRAINLAYER

	Per yd. run Depth of trench				
	2 ft.	3 ft.	4 ft.	5 ft.	10 ft.
	s. d.	s. d.	s. d.	s. d.	s. d.
Excavate trench, part return fill and ram and remove surplus, inc. planking and strutting. (In firm soil—if in clay or chalk adjust in accordance with previous excavation rates)	8 3	21 7	28 10	36 0	106 3

	Per yd. run			
	4 in.	6 in.	9 in.	
Concrete (1: 6–1½ in agg.) 12 in. wider than external diameter of pipe in 4 in. bed and benching up on both sides	s. d. 8 0	s. d. 8 10	s. d. 11 3	
do. but 6 in. bed and do.	9 7	11 3	13 7	
do. but 4 in. bed and surround to pipe	11 7	14 5	19 0	
do. but 6 in. bed and surround to pipe	15 7	18 10	23 9	
	Per ft. run			
Salt glazed drain pipes laid and jointed in trench (Minimum two-ton loads):	4 in.	6 in.	9 in.	
	s. d.	s. d.	s. d.	
'Seconds'	2 8½	3 10	6 1	
'Best'	2 11	4 2½	6 9½	
'Best Tested'	3 7¼	5 1¾	8 7	
'British Standard'	3 1¾	4 5½	7 3½	
'British Standard Tested'	3 8¾	5 5	8 11	
Extra for bends 'Best' quality	4 0	5 10	16 11	
Extra for junctions 'Best' quality	7 0	9 11	21 4	
Cast-iron drain pipes to BSS 437 laid and jointed with molten lead in trench	15 3	22 6	—	
Extra for:				
Short lengths	4 0	5 1	—	
Bends and extra joints	22 6	59 0	—	
Junctions and do.	46 3	102 8	—	
Cast-iron gulley trap with 9½ in. x 6½ in. grating and joint	45 2	—	—	
Cast-iron rainwater shoe with vertical inlet, inspection door and bedding and joints ...	70 3	—	—	
Cast-iron inspection fittings with single branch fitting one side	164 0	—	—	

	Per ft. run		
	3 in.	4 in.	6 in.
	s. d.	s. d.	s. d.
Pitch fibre pipes to BS 2760 and laying and jointing in trench (in loads of £60 to £250)	2 6	3 3	6 2

		4 in.	6 in.
		s. d.	s. d.
Manhole items:			
Brown glazed stoneware straight half-round channels	Each	5 4	7 8
do. ordinary channel bends	,,	11 10	16 11
Three-quarter section curved channel bends with splayed ends	,,	15 0	21 6
Cast-iron heavy galvanised steps	Each		13 0
Bedding and sealing medium weight manhole covers and frames (cost of cover to add)	,,		10 0
do. heavy road covers and frames	,,		13 3

MASON

	Per ft. cube		
	Bath	Portland	York
	s. d.	s. d.	s. d.
Stone and all labours fixed in:			
Ashlar average 6¾ in. on bed ... Ft. sup.	32 8	37 5	39 0
Moulded string course 9 in. x 6 in. Ft. run	28 4	31 0	33 10
Moulded cornice 18 in. x 9 in. ... ,,	71 6	77 6	82 6
Weathered and throated cills:			
9 in. x 3 in. ... ... ,,	17 10	19 3	20 7
12 in. x 6 in. ... ... ,,	35 9	38 0	40 2
Weathered and throated copings:			
12 in. x 3 in. ... ... ,,	19 3	21 0	21 9
14 in. x 6 in. ... ... ,,	38 0	43 0	44 6
Plinth rubbed top and face size:			
4½ in. x 9 in. ... ... ,,	19 6	21 9	21 0
Plain steps, size 12 in. x 6 in. ... ,,	—	—	35 9
,, ,, ,, 14 in. x 2 in. ... ,,	—	—	16 9
Riser, size 2 in. x 4 in. ... ,,	—	—	8 0
2 in. Sawn paving edges squared in random sizes ... ... Yd. sup.	—	—	98 0
Supplied only:			
Templates and cover stones coped edges ... ... Ft. cube	—	—	33 6

ROOFER

	Yd. sup.
	s. d.
Bituminous built-up roofing in: two layers of felt, the first layer 45 lb. and the second 55 lb. to BS 747, covered with limestone or granite chippings n.e. ¼ in. thick	10 0
All as above but in three layers, the first and second layers in felt 45 lb.	13 9

	Steel Tees at	
	2 ft. 0½ in. centres	4 ft. 0½ in. centres
2 in. compressed straw building slabs in standard sizes fixed complete with 18G steel tees with fixing clips to steel structure to form roof decking:		
	s. d.	s. d.
Areas of 50–100 yds. sup.	27 8	21 4
,, 101–250 ,, ...	26 10	20 9
,, 251–750 ,, ...	26 0	20 3
,, Over 750 ,, ...	25 2	19 4
If 16G steel tees are used—Add to above ...	1 5½	9

Welsh Slating	Per square		
	16in.x8in.	18in.x10in.	20in.x10in.
	s. d.	s. d.	s. d.
Laid with 3 in. lap and 2 zinc nails each slate	380 0	408 0	499 0
Additional labours:			
Top edge cutting ... Ft. run	9	9	9
Square abutment do. ,,	9	9	9
Double course at eaves... ,,	1 3	1 3	1 3
Raking, cutting and waste ,,	11	11	11
1½ in. x ¾ in. slate battening for last ... ... Per sq.	36 9	33 0	29 3

Roof Tiling	Per square		
	Berkshire hand-made	Stafford machine made	Concrete Tiles
	s. d.	s. d.	s. d.
Roof tiling with 10½ in. x 6½ in. tiles laid to a 4 in. gauge, every fourth course fixed with two galvanised nails	264 0	253 0	163 3
1 in. x ¾ in. tile battening for last	39 6	39 6	39 6
Additional labours:			
Top edge cutting ... ... Ft. run	9	9	9
Square abutments do. ... ,,	9	9	9
Raking cutting to hips ... ,,	11	11	11
Eaves course ... ... ,,	11	11	11
Half-round ridge and hip tiles ,,	2 11	2 11	2 11

CARPENTER AND JOINER

	Ft. cube			
	Plates	Joists	Rafters & Partitions	Roof trusses
	s. d.	s. d.	s. d.	s. d.
Softwood carcassing, including all waste, nails, hoisting and fixing	17 1	19 10	22 10	27 4

	Per square		
	¾ in.	1 in.	1¼ in.
	s. d.	s. d.	s. d.
Boarding and Flooring: (Softwood):			
Rough boarding to flats and roof ...	125 0	160 0	194 9
Softwood plain edge flooring cleaned off	155 0	173 6	211 0
Tongued and grooved flooring cleaned off	169 0	195 4	237 0

		s. d.
Extra for 2 in. x 3 in. average firrings	Per sq.	81 7
Herringbone strutting to 2 in. x 8 in. joists	Ft. run	1 10
1 in. gutter boarding and bearers	Ft. sup.	3 9
Raking cutting and waste on 1 in. flooring	Ft. run	9
Composition Boards, etc.:		
⅛ in. hardboard to BS 1142 fixed to vertical battens	Yd. sup.	6 9
½ in. insulation board to BS 1142 do. do.	,,	6 11
1 in. woodwool slabs fixed to flat or sloping soffits	,,	9 7
2 in. compressed straw building slabs in standard sizes fixed to wood bearers to flat or sloping surfaces in quantities of 101 to 250 yds. super	,,	14 8
¼ in. flat asbestos sheeting fixed vertically	,,	11 0

	s. d.
Wood Block Flooring:	
1 in. nominal West African mahogany flooring laid herringbone pattern in mastic ... ... Yd. sup.	34 6
1 in. do. Agba ... ... ,,	34 6
1 in. do. Sapele ... ... ,,	36 3
1 in. do. Beech ... ... ,,	39 0
1 in. do. Rhodesian Teak ... ... ,,	52 0
Extra for preparing and polishing 2/3 yd. sup.	

	Sectional area		
	n.e. 4 in.	*4–6 in.*	*ex. 6 in.*
Skirtings:	s. d.	s. d.	s. d.
Softwood skirting with rounded or moulded edge, planted on including all labours in short lengths, mitres, etc., per in. in sectional area	3¾	3½	2¾

Labours over 6 in.—Mitres=1 ft. run. Return mould ends=1 ft. 6 in. run
Sawn grounds nailed 3¼d. ft. run. If plugged+7d. ft. run.

	Ft. super	
	Large sqrs.	*Small sqrs.*
Sashes and Frames: (Softwood):	s. d.	s. d.
1½ in. rebated, rounded or moulded fixed	3 7	5 9
2 in. ,, ,, ,, ,, ...	4 0	6 2
Add for hanging on butts ... ... each	2 9	2 9
Double-hung sashes and frames with oak cills, purpose-made and not less than 1 doz. in each order:		
Quantities under 1 doz.—add up to ⅓ according to quantity. (Average size 4 ft. x 5 ft.)	10 8	14 6

Extra cost of boxed mullions 1s. ft. sup.
Extra for hanging sashes with lines, weights and axle pulleys 47s. each.

	Ft. super			
	1¼ in.	*1½ in.*	*1¾ in.*	*2 in.*
Doors: (All-purpose-made) (Softwood)	s. d.	s. d.	s. d.	s. d.
Softwood skeleton framed with hardboard flush both sides (standard internal pattern)	3 7	4 0	4 5	4 10
Framed, ledged and braced	—	5 1	6 2	6 4
Four panel square framed both sides	4 10	5 7	6 7	6 10
Add for each side moulded on last...	6	6	6	6
do. flush framed	1 0	1 1	1 3	1 3
do. bead and butt do.	1 3	1 4	1 6	1 6
do. bolection moulded do.	1 6	1 6	1 6	1 6
do. raised and fielded do.	—	2 4	2 4	2 4

Rebated and beaded meeting stile 4d. ft. run.
Dwarf doors add up to 50 per cent according to size.

	Sectional area		
	n.e. 6in.	*6-12 in.*	*ex. 12in.*
Window and Door Linings and Frames:	s. d.	s. d.	s. d.
Softwood linings per inch of sectional area	4½	4	3½
Add for cross-tongueing	—	1	¾
Frames, including rebating and once moulded or equivalent of two run labours, per sectional inch	4	3½	3

Transomes and cills plus 10 per cent on frames.
Additional run labours plus 1½d. per ft. run.

	Per ft. run			
	Sectional area			
	1 in.	*2 in.*	*4 in.*	*6 in.*
Softwood Bearers, Fillets and Mouldings, etc.:	s. d.	s. d.	s. d.	s. d.
Wrot grounds, bearers, fillets, etc.	4½	7	11	1 3
Mouldings, picture rails, architraves, etc.	5	7½	11½	1 4
Framed legs and bearers or similar	9	11	1 4	1 10
Glazing beads, mitred and bradded	6	8½	—	—
Add for plugging	6	6	6	6
Add for brass cups and screws ...	2½	2½	2½	2½

	Thickness			
	¾ in.	*1 in.*	*1¼ in.*	*1½ in.*
Shelving (Softwood):	s. d.	s. d.	s. d.	s. d.
Slat shelving 2 in. wide spaced 1 in. between ... ... Ft. sup.	2 0	2 3	2 8	3 1
9 in. shelving ... ... Ft. run	2 0	2 4	2 10	3 6
Shelving over 9 in. wide ... Ft. sup.	2 7	2 11	3 7	4 2

1 in. x 2 in. chamfered bearers in short lengths, plugged, each 2s. 3d.

	Ft. super	
	1 in. treads	*1½ in. treads*
Staircases (Softwood):	s. d.	s. d.
Treads and risers with moulded nosings, glued, blocked and bracketed on carriages	6 3	7 0
Cross-tongued winders	8 3	9 4

	s. d.
Strings, framed ... ... Ft. run	4 9
Housings for treads and risers ... ... Each	3 0
1 in. x 1 in. sq. balusters framed each end on rake ... ,,	4 1
3½ in. x 3½ in. sq. framed newel ... ... ,,	5 2
Mahogany handrail, average 3 in. x 3 in. ... ... Ft. run	8 10
,, ,, ramped ... ... ,,	26 0

FIXING ONLY IRONMONGERY

All to Softwood:	*Each* s. d.		*Each* s. d.
Barrel bolts	1 9	Rim locks	5 2
Flush bolts	6 3	Mortice locks	11 0
Sash fasteners	3 4	Overhead door springs...	14 6
Casement fasteners ...	2 3	Patent floor springs and oil	36 3
Cupboard locks	5 0		

FOUNDER AND SMITH

	s. d.
Fabricated steelwork of basis section including hoisting and fixing at various levels :	
Rolled steel joists ... ... per cwt.	90 0
Compound girders ... ... ,,	97 0
Stanchions ... ... ,,	102 3
Compound stanchions ... ... ,,	108 0
In roof work—trusses and purlins ... ... ,, (Average prices, not for awkward work)	122 0
Cleats, brackets, packing pieces, etc., in connections, including rivets and bolts ... ... ,,	147 6
Wrot iron framed cat ladders ... ... ,,	148 0 to 168 0

PLUMBER

	Per ft. run		
	3 in.	*4 in.*	*5 in.*
Cast iron rainwater goods: (Under 5 cwt. lots) :	s. d.	s. d.	s. d.
Half-round gutter jointed in red lead and bolted and fixed with iron brackets	3 2	3 9	4 7
Extra for stop ends ... ... each	2 5	3 0	3 11
do. angles or outlets ... ... ,,	5 10	6 2	7 3
O.G. gutter of ¼ in. metal fixed as above	3 8	4 2	4 11
Extra for stop ends ... ... each	2 9	3 4	4 4
do. angles or outlets ... ... ,,	6 7	6 9	8 1
	2 in.	*3 in.*	*4 in.*
Rainwater pipe jointed in red lead and tow fixed to brickwork with pipe nails and distance pieces: ¼ in. metal	4 3	4 10	6 3
Extra for shoes ... ... each	5 0	6 10	9 2
do. bends ... ... ,,	5 9	8 1	10 4
do. junctions ... ... ,,	7 9	11 0	14 1
Cast iron soil and waste pipes: (Under 5 cwt. lots) :			
Soil, waste or ventilating pipes with caulked joints fixed to brickwork with pipe nails and distance pieces : 13/64 in. metal	2 in. 6 2	3 in. 7 3	4 in. 9 6
Extra for bends ... ... each	13 7	16 2	20 2
do. junctions ... ... ,,	16 10	23 3	29 2
do. oval access door to any fitting ,,	16 6	16 6	21 3
Extra cost for type 'E' holderbat fixing and cutting and pinning to brickwork ft. run	1 6	1 7	1 7½

	Soakers	Flats	Gutters, valleys, etc.	Flash-ings	Stepped Flash-ings
External leadwork: (Over 1 ton):	s. d.	s. d.	s. d.	s. d.	s. d.
Milled lead and labour in per cwt.	138 0	163 7	176 7	183 1	196 1
Labours, etc.: Double welt				ft. run	1 0
Copper nailing: Open				,,	7
Close				,,	1 0
Soldered seam				,,	6 7

	2 in. x 10 lb.	3 in. x 15 lb.	4 in. x 19 lb.
Lead pipes: (Over 1 ton):	s. d.	s. d.	s. d.
Soil, waste and ventilating pipes, fixed to walls with plain lead tacks and brass screws ... ... per ft.	10 10	14 2	18 7
Extra for: Lengths under 4 ft. ... ,,	3 0	3 6	4 6
Bends ... ... No.	12 6	23 9	24 10
Wiped soldered joints ... ... ,,	20 0	29 7	33 7
,, branch joints ... ... ,,	24 4	35 0	39 3

	Per ft. run					
	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Lead pipes including running joints:	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Main in trench ...	3 4	5 0	7 5	9 3	11 9	16 5
do. fixed with hooks	4 0	5 10	8 8	10 8	13 4	18 3
Service and do. ...	3 5	5 0	6 11	8 3	10 4	13 4
Waste and do. ...	2 8	3 11	5 7	6 7	8 4	10 11
Extra for lengths under 4 ft. ...	9	1 0	1 6	1 9	2 0	2 7
Soldered stop ends ... ... No.	2 6	3 0	3 9	4 6	5 2	6 8
do. joints to fittings ... ,,	6 6	9 2	11 0	13 4	16 3	19 9
do. branch joints... ... ,,	7 2	10 1	12 2	14 10	17 11	21 8
Brasswork: Union with red lead joint to iron and soldered joint to lead ... ... ,,	12 0	14 10	18 6	22 9	27 10	40 6
Stop-cock and soldered joints... ... ,,	21 0	30 8	43 7	70 0	89 6	167 5
Bib-cock do. ,,	18 6	24 9	—	—	—	—
Ball-valve do. ,,	18 0	30 4	43 5	71 7	89 6	—
Steel tubing: Galvanised tubing Class C laid in trench	2 4	2 6	2 10	4 1	5 6	6 6
do. Class B fixed to walls, etc. ...	2 7	3 0	3 4	4 5	6 2	7 1
Extra for bends No.	5 0	5 9	7 7	9 10	11 8	17 2
Tees ,,	5 8	6 9	8 2	10 10	12 10	18 8
Red lead joints ,,	3 6	3 9	4 1	4 7	5 1	5 7
Copper tubes and fittings: gauge	19	19	18	18	18	17
Tubes and fixing to walls	2 7	3 4	4 6	5 5	6 4	9 2
Extra for lengths under 4 ft. ...	7	9	11	1 0	1 3	1 6
Brass capillary type fittings: Couplings—copper to copper ...	3 8	4 4	6 9	8 9	11 2	15 3
Bends— do. ...	5 10	7 1	8 11	11 7	17 2	32 3
Tees— do. ...	8 7	9 11	14 2	19 2	26 3	36 4
Stop cocks	23 7	33 1	60 2	101 2	152 3	250 4
Tank connectors ...	4 9	5 4	8 1	10 2	14 3	18 4

PLASTERER

		s. d.
Expanded metal lathing ⅜ in. mesh 24 gauge ... (not including hangers for suspended work)	Yd. sup.	8 6
Lime Plastering: Render, float and set	,,	9 11
Sirapite Plastering: Render in Portland Cement, Lime and Sand and set in Sirapite	,,	7 9
Sirapite Plastering: Render and set in Sirapite plaster to manufacturer's instructions	,,	8 0
Paristone Plastering: do. do.	,,	8 3
Carlite Plastering do. do.	,,	8 10
Portland Cement: Plain face trowelled smooth ...	,,	9 11
Keenes: Render in cement and lime and set in Keenes	Yd. sup.	10 6
Extra for dubbing out ¼ in. thick 1/11, ½ in. thick 3/11		
⅜ in. Plasterboard and setting coat ...	,,	8 11
Narrow widths: Up to 3 in. wide add 300 per cent. Do. 3-6 in. do. 200 per cent. Do. 6-12 in., add 75 per cent.		
Labours: Arris 5½d. Fair edge 6½d. Quirk 10d.		
Plaster Moulded Cornices: 6 in. girth and under ...	Ft. run	3 1
Over 6 in. girth, add 3½d. per in.		
Tyrolean Rendering on and including Portland Cement and Sand backing	yd. sup.	12 8
Wall Tiling: 6 in. x 6 in. white glazed ¼ in. thick ...	,,	45 0
Extra for rounded angle or birdsbeak	Ft. run	4
do. rounded edge tile	,,	5

GLAZIER

	Wood sashes with beads or putty
Clear sheet glass ordinary quality :	s. d.
18 oz.	1 5
24 oz.	1 7¾
26 oz.	1 10½
32 oz.	2 3½
Obscured glass :	
⅛ in. Figured rolled White group 1	1 10½
,, ,, ,, group 2	2 2½
,, ,, Standard tints	2 6¾
⅛ in. Pinstripe, Hammerstripe, Reeded, Reedlyte and luminating group 3	2 4
¼ in. Wired Cast	2 7¾
¼ in. Georgian Wired Cast	2 8
¼ in. Polished Plate Glass, G.G. Quality :	
In plates not exceeding 2 ft. sup.	6 8½
,, ,, ,, 5 ft. sup.	7 8½
,, ,, ,, 45 ft. sup.	9 8½
,, ,, ,, 100 ft. sup.	9 7½
Extra on all above :	
For glazing with screw beads ft. sup. ... ... (Excepting polished plate over 12 ft. super on which no extra is charged)	5½
For glazing with metal sashes with putty	1
Glazing bedded in washleather ... ... Ft. run	8½

PAINTER

		s. d.
Limewhiting : Prepare and two coats on brick ...	Yd. sup.	1 2
Whitening : Prepare and two coats on plaster ...	,,	1 5
Washable distemper: Prepare and two coats on plaster	,,	1 11
Emulsion paints: Prepare and two coats on plaster ...	,,	3 1

Painting with oil colours :	Yd. super 1 coat	2 coats	3 coats
	s. d.	s. d.	s. d.
Prepare and paint on plaster	2 3	4 3	6 4
On Steel :			
Plain surfaces	1 10	3 7	5 5
Roof trusses...	2 4	4 7	6 11
Metal casements divided into squares ...	3 4	6 8	10 0
do. divided into large squares ...	2 7	5 0	7 6
Opening edges ... ... Each	8	1 3	1 10
Small pipe ... ... Yd. run	6	1 0	1 5
Rainwater pipe ... ... ,,	1 0	1 11	2 9
Gutter ... ... ,,	1 4	2 6	3 8

	Knot prime and stop	Add for each extra coat
On Woodwork :	s. d.	s. d.
General surfaces ... ... Yd. sup.	2 10	2 3
On work not exceeding 3 in. girth ... Yd. run	4½	3½
Add to last for every additional 3 in. in girth	3½	2¾
Sash squares on one side ... ... Doz.	5 6	4 6
Large ,, ,, ,, ... ,,	8 6	8 0
Opening edges ... ... No.	9	8

		s. d.
Oiling Hardwood : Two coats with linseed oil... ...	Yd. sup.	1 4
Creosote : Two coats on woodwork	,,	1 7
Polishing—New Work :		
Staining and wax polishing hardwood	Ft. sup.	1 1
Staining, bodying in and full french polishing on hardwood	,,	2 6
Old Work previously polished :		
Preparing old work and repolishing	,,	1 2
Stripping, preparing and repolishing	,,	3 1
Papering :		
Preparing, sizing and hanging lining paper	per piece	10 7
do. do. Wallpaper, p.c. 10s.	,,	19 8

- Light Weight
- Variable Gauge
- Low Pitch
- Wide Colour Range
- Low Cost
- 50 Year Guarantee

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GROVEBURY ROAD, LEIGHTON BUZZARD, BEDS.
Tel: Leighton Buzzard 2268 & 3418

THE BUILDER CURRENT PRICES

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials, not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. It is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

		£	s.	d.
Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.				
Pit Ballast	per yd.	1	5	5
Pit Sand	,,	1	3	8
Washed Sand	,,	1	6	9
¾ in. Shingle	,,	1	4	3
¾ in. Broken Brick	,,	1	0	9
Pan Breeze	,,	1	1	6
Fine or Coarse Foamed Slag Aggregate	per ton	3	8	0
2 yds. of fine and 2.6 yds. of coarse per ton.				

CEMENT, etc.

		£	s.	d.
Including non-returnable jute sacks or paper bags.				
Best British Portland Cement. Standard Specification delivered Charing Cross area.				
6-ton loads and upwards, site	per ton	5	12	0
1 to 6 tons, site	,,	6	4	0
Rapid-Hardening Cement in 6-ton loads and upwards to site	,,	6	2	6
1 to 6 tons do. site	,,	6	14	6
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.				
Sulphate Resisting Cement. 32s. 6d. per ton on ordinary cement prices.				
Red, Buff or Khaki Colocrete in 6-ton lots	,,	8	12	0
Other colours according to colour.				
In 4-ton lots from 310s. 0d. to 780s. 0d. per ton.				
White Portland Cement	,,	13	17	6
Under 1 ton	per cwt.		16	11
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards	per ton	7	4	6
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.				
Cullamix Tyrolean Finish, £11 f0s.0d. to £14 5s.0d. (1-ton loads and upwards).				
Ciment Fondu and Lightning Brands High Aluminous cement, 6-ton lots and up	,,	15	14	6
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	6	19	0
Stourbridge Fireclay, 6-ton loads (London sites)	,,	7	7	0
Moler Mortar Powder for Flue Bricks (London sites)	per cwt.	1	6	0

BRICKS

Full Loads		£	s.	d.
First Hard Stocks	per 1,000	16	19	6
Second Hard Stocks	,,	14	13	6
Mild Stocks (Kiln Burnt)	,,	10	15	0
Mild Stocks	,,	10	10	0
All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.				
2½ in. Nominal Fletton Bricks to sites in W.C. district :				
Commons	,,	6	12	0
Cellular Commons	,,	6	12	0
Keyed do.	,,	6	14	0
Rustics	,,	8	12	0
Cellular Rustics	,,	8	12	0
Single Bullnose Commons	,,	8	14	6
Sandfaced	,,	9	12	0
Tuscans	,,	10	7	0
Saxons	,,	10	15	0
Golden Buffs	,,	11	2	0
Dapple Light Facings	,,	11	9	6
Heather Facings	,,	11	5	0
Best Blue Pressed Staffs (London sites)	,,	33	4	9
do. Bullnose (London sites)	,,	34	3	9
Blue Wire Cuts (London sites)	,,	29	9	6
Midhurst Lime Bricks (London sites)	,,	11	13	0
Uxbridge Whites (London sites)	,,	11	8	6
Special Purpose Sandlime Bricks (London sites)	,,	8	12	0
Best Stourbridge Fire Bricks :				
2½ in. (London stations)	,,	30	12	3
2½ in. (London sites)	,,	31	1	0
3 in. (London stations)	per 1,000	36	14	9
3 in. (London sites)	,,	37	5	3
2⅞ in. Moler Flue Bricks (London sites)	,,	31	0	0
2½ in. Machine-made Sandfaced Red Facings (London sites)	,,	18	16	6
2½ in. Machine-made Multi Red Facings (London sites)	,,	19	1	6
2½ in. Hand-made Sandfaced Red Facings (London sites)	,,	20	7	6
2½ in. Hand-made Sandfaced Multi-Colour Facings (London sites)	,,	20	7	6
Hand-made Sandfaced Cherry Red Facings, Berkshire district (London sites)	,,	21	5	0
Hand-made Sandfaced Multi-Colour Facings, Berkshire district (London sites)	,,	21	5	0
Rubber Bricks for gauged arches (London sites)	,,	52	5	0
2½ in. Surrey Clamp Burnt Multi Stock Facings (London sites)	,,	16	15	0
2½ in. Surrey Kiln Burnt Multi Stock Facings (London sites)	,,	17	7	0
Glazed Bricks (London sites), White, Ivory, Brown:				
Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0
Cream and Buff, £3 extra over White. Other colours, hard glaze, £8 10s. 0d. extra over White. All above prices plus 40% for Best quality and plus 40% less 10% for Second quality.				

PARTITION SLABS, etc.

Delivered Central London Area. (W.C. District.)

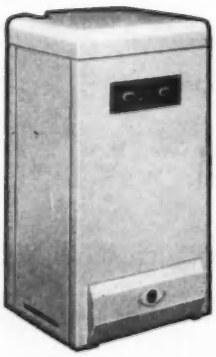
		£	s.	d.
HOLLOW CLAY PARTITION BLOCKS (KEYED) Minimum lorry loads				
*2½ in. 140 yds.	per yd. sup.		4	7
BUILDING BLOCKS (KEYED)				
*3 in. (6 cavity) 110 yds.	,,		5	9
*4 in. (6 cavity) 90 yds.	,,		7	3
6 in. (8½ in. × 5⅛ in.) 1,250 blocks	per 1,000	28	9	0
* Half blocks at no extra charge.				
CLINKER CONCRETE				
2 in. 100 yds.	per yd. sup.		3	11
2½ in. 85 yds.	,,		4	6
3 in. 75 yds.	,,		5	6
4 in. 55 yds.	,,		6	11
CRANHAM TERRA COTTA				
2 in.	,,		7	5
2½ in.	,,		8	4
3 in. Load bearing quality	,,		9	6
4 in. do. do	,,		11	6
MOLER PARTITION BLOCKS				
2 in. 150 yds.	,,		12	9
2½ in. 120 yds.	,,		13	9
3 in. 100 yds.	,,		14	9
4 in. 90 yds.	,,		17	0
LIGHTWEIGHT CONCRETE BUILDING AND PARTITION BLOCKS OF VARIOUS SOURCES OF MANUFACTURE				
2 in. 100 yds.	per yd. sup.		5	4
2½ in. 80 yds.	,,		6	5
3 in. 65 yds.	,,		7	5
4 in. 50 yds.	,,		9	4
4½ in. 44 yds.	,,		10	2
6 in. 33 yds.	,,		14	5
THERMALITE-YTONG PARTITION BLOCKS				
2½ in. 144 yds.	,,		7	0
THERMALITE-YTONG LOAD-BEARING INSULATING BLOCKS				
3 in. 120 yds.	per yd. sup.		8	5
4 in. 90 yds.	,,		11	0
5 in. 72 yds.	,,		13	9
6 in. 60 yds.	,,		16	6
8½ in. 42 yds.	,,	1	3	8
FLOOR BLOCKS AND FILLER TILES				
Floor Blocks 12 in. × 12 in. delivered in full lorry-loads :				
3 in.	per 1,000	35	14	0
4 in.	,,	38	9	0
5 in.	,,	46	1	0
6 in.	,,	52	12	0
7 in.	,,	64	12	0
8 in.	,,	75	9	0
9 in.	,,	83	2	0
10 in.	,,	92	0	0
Filler Tiles in multiples of 10 tiles per 1,000 multiples :				
12 in. × 3 in. × ⅝ in.	,,	43	13	0
12 in. × 4 in. × ⅝ in.	,,	75	7	0
10 in. × 5 in. × ⅝ in.	,,	75	7	0

"Why do I recommend gas-fired boilers...?"

"Well, look at the advantages of I.B.R. boilers . . ."

The Economatic

will provide ample hot water for daily use and heat up to 140 sq. ft. of radiators. In boilercase is contained ThermoPak accelerator, electrically operated time clock, selector switches, temperature control governor, flame failure device, gas cocks, etc. From 85 gns. plus radiators as required.



The Aristomatic

provides full domestic hot water supplies and heats up to 175 sq. ft. of radiators, larger versions also available. Two separate heating outlets, one to bedrooms etc. (night area) and the other living quarters and hall (day area). In-built controls automatically provide heat to the appropriate areas at the right time of day or night, thus achieving maximum comfort at a really low cost. From 105 gns. plus radiators as required.

All iron pipework is contained within the one unit—no need even to take screwing tackle on the job. The whole installation can be done in copper.

Pump, time clock and all controls ready fitted and wired inside the boiler case—no electric wiring to do—just plug in.

Absolutely independent of flue draught—no installation problems. Complete customer satisfaction—when you have sold an International boiler your customer himself will sell two or three more for you! A job you can do more quickly, at a keener price and far neater because everything is contained within the boiler case.

This is what your CUSTOMERS want to know about IBR boilers

ECONOMATIC & ARISTOMATIC Boilers give small bore heating plus!

Lowest ever running costs. In most areas gas now costs little more than half the old prices. *International Boilers are super efficient* and the automatic controls give value for every pennyworth of fuel. The wonderful ARISTOMATIC, which automatically heats the appropriate part of the house when heat is required—and only then—often costs less to run than conventional solid fuel boilers.

Switch on—that's all! No more stoking, raking or cleaning. No fuel tanks, absolutely no attention required.

Heating and hot water whenever it's wanted.

Cost: from 85 guineas (Economatic).

Easy deferred payments for entire installation, without recourse to you in the event of default.

Available from Area Gas Boards and all good Builders' Merchants.

INTERNATIONAL

BOILERS AND RADIATORS

HEAD OFFICE AND WORKS

EARLSWAY · GATESHEAD-ON-TYNE

STONEWARE DRAIN PIPES, etc.

Glazed Stoneware Standard List (November, 1956).

		4 in.	6 in.	9 in.
Pipes, 2 ft. lengths	per ft.	1/8	2/6	4/6
Bends	each	5/–	7/6	20/3
Junctions	,,	8/4	12/6	27/–
Gullies with 4 in. outlets	,,	12/6	13/9	22/6

The following are the percentages to be added to the Standard List (November, 1956) prices delivered London Area.
Delivered ex Merchants Wharf or Depot.

	Over 2 tons	Under 2 tons	Over 100 pieces	Under 100 pieces
Best Quality ...	−5%	+15%		+20%
BSS Best Quality ...	+10% −5%	+10% + 15%		+10% +20%
Tested Quality ...	+37½% −5%	+37½% + 15%		+37½% +20%
BSS Tested Quality...	+47½% −5%	+47½% + 15%		+47½% +20%

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	12	10	6
4 in. do. do.	,,	16	16	0
6 in. do. do.	,,	34	10	0
9 in. do. do.	,,	64	19	0

DAMP COURSE

		£	s.	d.
Hessian base bitumen 7 lb. per yd. sup. in 24 ft. rolls cut to wall widths in lots of £6 value and over delivered London area	per yd. sup.		3	5
Asbestos base do. 7 lb. per yd. sup.	do. do. ,,		5	2
Lead lined bitumen do. 9½ lb. per yd. sup.	do. do. ,,		12	2
18 in. × 9 in. British damp course slates	per 1,000	43	8	11
14 in. × 9 in. do. do.	,,	32	8	2
9 in. × 9 in. do. do.	,,	18	18	9
18 in. × 4½ in. do. do.	,,	19	19	9
14 in. × 4½ in. do. do.	,,	15	18	3
9 in. × 4½ in. do. do.	,,	10	14	3

STONE

		£	s.	d.
Bath Stone				
Monks Park	per ft. cube		10	3
St. Aldhelm Box Ground	,,		11	6
Delivered in railway trucks at South Lambeth B.R. Western Region.				
Doulting Stone Random Blocks. Delivered London area	,,		10	10
Beer Stone. Delivered London area	,,		10	6
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		9	10
Yorkshire Stone—Blue Robin Hood Quality. Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stolled cills	per ft. cube	4	5	10
12 in. × 6 in. do. do. do.	,,	3	1	2
12 in. × 3 in. Plain coping, twice throated	,,	2	7	6
12 in. × 3 in. Weathered and twice throated coping	,,	3	3	3
14 in. × 6 in. do. do. do.	,,	2	17	0
4½ in. × 9 in. Plinth rubbed on top and face ...	,,	2	11	0
3 in. sawn two sides Slabs, random sizes ...	per ft. sup.		9	1
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1	11	3
do. do. fair one edge for fair faced brickwork	,,	1	17	0
Hard York—				
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run		11	0
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	18	3
12 in. × 6 in. Plain Steps, rubbed top and front	,,	2	11	0
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.		10	3
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	3	12	0

TILES AND PANTILES

Delivered London area by road in 6 tons or over per 1,000.

	£	s.	d.
Machine-made Pantiles and French pattern Tiles from Lincolnshire district	29	19	0
Hand-made Pantiles Berkshire district	55	18	0
Hand-made Double Roman Bridgwater district ...	64	4	1
Hand-made 10½ × 6½ tiles Berkshire district	16	10	9
Machine-made 10½ × 6½ Staffordshire district	16	1	6
Hand-made Hip and Valley tiles per doz.	1	11	10
Machine-made Hip and Valley tiles do.	1	10	1
Concrete tiles 10½ × 6½	8	10	0
do. Interlocking (49S)	19	16	6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate station. Per 1,000 actual.

	£	s.	d.
24 × 12	155	10	0
22 × 12	123	10	0
22 × 11	111	10	0
20 × 12	104	10	0
20 × 10	102	0	0
18 × 10	69	10	0
18 × 9	61	0	0
16 × 10	54	8	10
16 × 8	42	12	4

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

		Ex Wharf	per standard	£	s.	d.
Softwood				£115 to £140		
Joinery quality		do.	,,	£94 — £98		
Carcassing quality		do.	,,	£110	0	0
1 in. Tongued and Grooved Flooring		do.	,,			
Hardwood				£	s.	d.
Mahogany—	African S.E.	do.	per ft. cube	1	10	0
do.	Honduras S.E.	do.	,,	3	5	0
Oak	European S.E.	do.	,,	2	10	0
do.	Japanese S.E.	do.	,,	3	0	0
do.	English Logs sawn ...	do.	,,	2	0	0
Teak	8 in. average S.E. ...	do.	,,	3	17	6
Walnut	African Logs sawn ...	do.	,,	1	2	6

		£	s.	d.
Plywood				
6 mm. (¼ in.) Birch Plywood B/BB	per 100 sq. ft.	4	4	6
6 mm. Israeli Gaboon do. B/BB exterior grade WBP (AX100)	,, ,,	4	5	3
18 mm. Birch Blockboard	,, ,,	9	10	0
¾ in. Douglas Fir Plywood 96 in. × 48 in. Exterior grade WBP (AX100) solid two sides	,, ,,	9	11	0

DOORS (in Lots I–II)

		£	s.	d.
Delivered London area.				
1¼ in. 4 Horizontal Panel. Pattern 4 in. deal				
2 ft. 0 in. × 6 ft. 6 in.	each	1	16	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	17	6
2 ft. 6 in. × 6 ft. 6 in.	,,	1	18	6
2 ft. 9 in. × 6 ft. 6 in.	,,	2	0	6
2 in. do. but top panel open. Pattern 4 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	9	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	11	6
2 in. 2 Panel top panel open. Pattern 2 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	3	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	5	0
1¼ in. Plywood Faced Flush Doors to BS 459, Part 2A				
2 ft. 0 in. × 6 ft. 0 in.	,,	1	12	3
2 ft. 0 in. × 6 ft. 6 in.	,,	1	12	3
2 ft. 3 in. × 6 ft. 6 in.	,,	1	13	9
2 ft. 6 in. × 6 ft. 6 in.	,,	1	15	3
2 ft. 9 in. × 6 ft. 6 in.	,,	1	18	0
1¼ in. Hardboard Faced Flush Doors.				
2 ft. 0 in. × 6 ft. 0 in.	,,	1	5	6
2 ft. 0 in. × 6 ft. 6 in.	,,	1	6	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	6	6
2 ft. 6 in. × 6 ft. 6 in.	,,	1	8	6
2 ft. 9 in. × 6 ft. 6 in.	,,	1	9	6

SUNDRIES

		£	s.	d.
Delivered London area.				
1 in. Wood Wool Slabs 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton)	per yd.		6	2
1½ in. do. (67 yds. to 1 ton)	,,		8	0
2 in. do. (52 yds. to 1 ton)	,,		9	9½
2½ in. do. (45 yds. to 1 ton)	,,		11	3
3 in. do. (39 yds. to 1 ton)	,,		12	7½
Quantities under 1 ton add 1d. per ½ in. of thickness.				
½ in. imported or home produced insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2	2	6
¼ in. Hardboard do.	,,	1	17	6
⅛ in. do. do.	,,	2	4	6
2 in. Compressed Straw Slabs, roofing quality. 6 ft., 8 ft., 9 ft., 10 ft. and 12 ft. × 4 ft.				
50–100 yds.	per yd. sup.		11	4
101–250 yds.	,,		10	10
251–750 yds.	,,		10	1
Over 750 yds.	,,		9	4
2 in. do. for partitions 4d. per yd. cheaper.				
1/16 in. Asbestos Flat Building Sheets...	,,		4	3½
⅛ in. do. do. do.	,,		6	0
Roofing Felt 1-ply	,,		1	9
do. 2-ply	,,		2	2½
Best Scotch Glue in slabs	per ½ cwt.	5	8	0
do. pearl	,,	5	8	0
Croid Glue	28 lb.	2	6	0
Impact Adhesive	per gall.	2	12	0
Cut Nails 3 in. (1-ton lots)	per ton	81	10	0
do. 4 in. and up (1-ton lots)	,,	78	0	0
Wire Nails 3 in. (4-cwt. lots)	per cwt.	3	19	2
do. 4 in. and up (4-cwt. lots)	,,	3	16	6

METALS

STEEL JOISTS, ETC.

		£	s.	d.
Basis Joists—				
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in., 12 in. × 6 in., plain cut to lengths delivered London area	per ton	17	15	0
Extra for sizes				
3 in. × 1½ in. 4 in. × 1½ in.	,,	3	10	0
3 in. × 3 in.	,,	2	10	0
4 in. × 3 in.	,,	2	5	0
10 in. × 4½ in.	,,	1	10	0
5 in. × 2½ in. 5 in. × 3 in.	,,	1	15	0
4½ in. × 1½ in.	,,	3	5	0
5 in. × 4½ in. 7 in. × 3½ in. 13 in. × 5 in. ...	,,		15	0
6 in. × 3 in. 24 in. × 7½ in.	,,	2	0	0
6 in. × 4½ in. 7 in. × 4 in. 8 in. × 4 in. 9 in. × 4 in. 10 in. × 5 in.	,,	1	5	0
12 in. × 5 in. 22 in. × 7 in.	,,	1	0	0

METALS—*continued*

		£ s. d.
9 in. × 7 in. 10 in. × 8 in. 12 in. × 8 in. 14 in. × 5½ in. 14 in. × 6 in. 14 in. × 8 in. 15 in. × 5 in. 15 in. × 6 in. 16 in. × 8 in.	per ton	10 0
16 in. × 8 in. 18 in. × 6 in. 18 in. × 7 in. 18 in. × 8 in. 20 in. × 6½ in. 20 in. × 7½ in.	,,	10 0
Steel angles average price	,,	48 15 0
Steel tees average price	,,	49 15 0
Fabricated work delivered London—		
R.S. Joists cut and fitted	,,	67 19 9
Compound girders	,,	72 14 3
Stanchions	,,	78 9 9
Compound stanchions	,,	83 4 3
In Roof Work—Trusses and Purlins	,,	93 19 6
Average prices not for awkward work.		
Angle cleats and ⅝ in., ¾ in. and ⅞ in. bolts average price London area	per cwt.	5 10 0

Ferro-Concrete Bars and Fabric

		£ s. d.
Mild Steel Ferro-Concrete Bars British manufacture to BSS 785 ex. Mills. 1 in. diameter and upwards delivered nearest London station ...	per ton	40 10 0
do. do. ex. London Stock do. delivered London site	,,	49 10 0
Extras—		
⅜ in. diam.	per ton extra	8 12 6
½ in. do.	,,	6 12 6
⅝ in. do.	,,	4 12 6
¾ in. do.	,,	3 2 6
⅞ in. do.	,,	1 10 0
⅛ in. and ¼ in. diam.	,,	15 0
Steel wire mesh reinforcing fabric to BSS 1221A.		
Ref. No. 106 ... ... 7.88 lbs.	per sq. yd.	5 1¾
,, ,, 109 ... ... 4.71 ,, ...	,,	3 0½
,, ,, 113 ... ... 1.83 ,, ...	,,	1 8¼
,, ,, 122 ... ... 7.32 ,, ...	,,	4 9½
,, ,, 125 ... ... 4.32 ,, ...	,,	2 10

Mild Steel Tubes

Tubes to BSS 1387. Fittings BSS 1740.

Basic List Prices

	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Tubes ... ... per ft.	9¼	10	1/–	1/2½	1/9	2/3	2/8	2/9
Bends ... ... each	1/7	1/9	2/–	2/6	3/8	5/5	6/2	10/7
Elbows, square ,,	1/8	1/10	2/2	2/6	3/–	4/4	5/2	8/6
do. round ... ,,	1/10	2/–	2/4	2/10	3/4	4/8	5/8	9/4
Tees ... ... ,,	2/–	2/2	2/6	3/2	3/8	5/–	6/2	10/2
Crosses ... ... ,,	4/4	4/8	5/6	6/6	8/2	11/–	13/2	21/–
Sockets, Plain ,,	6	6	8	10	1/–	1/4	1/9	2/6
do. Diminished ,,	8	10	1/–	1/2	1/6	2/–	2/8	4/–
Backnuts ... ,,	4	4	6	7	10	1/–	1/4	2/2

Malleable Fittings

	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Elbows, round each	8½	8½	9½	1/2½	1/8½	2/7½	3/6	5/–
Tees ... ... ,,	9½	9½	1/–	1/4½	2/–	2/9½	4/–	5/6
Crosses ... ... ,,	1/2½	1/2½	1/4½	2/–	2/9½	3/7½	5/2½	7/2½
Sockets ... ... ,,	5¾	5¾	7	9½	1/–	1/7½	2/2½	3/1½
Backnuts ... ,,	3	3	3½	4½	5¾	7¾	10½	1/5¼

Discounts from List prices as follows :—

Galvanised Tube—	Under 1 ton	Over 1 ton	W.I. Fittings	Malleable Fittings
Light	−38½%	−40 %	Light −25½%	Malleable List
Medium	−34½%	−36 %	Heavy −21½%	−18½%+40%
Heavy	−26½%	−28½%		
Black—				
Light	−49 %	−50½%	Light −31½%	Malleable List
Medium	−45 %	−46½%	Heavy −27½%	−18½%
Heavy	−37½%	−39 %		

C.I. Half-Round Gutters

Delivered London per yd. in 6 ft. lengths.

	Gutters	Nozzles	Stop Ends
3 in.	4/0½	3/7	1/–
3½ in.	4/4½	3/11	1/–
4 in.	5/8	4/5	1/7
4½ in.	6/3	4/11	1/10
5 in.	6/11½	5/4	2/2

C.I.O.G. Gutters

Per yd. in 6-ft. lengths :	Gutters	Nozzles	Stop Ends
3 in.	5/2½	4/8	1/3
3½ in.	5/10	4/8	1/7
4 in.	6/5	4/11	1/10
4½ in.	6/11½	5/8	2/2
5 in.	7/7½	6/5	2/6

C.I. Rain-Water Pipes

	Pipe	Bends	Branches
2 in.	8/7½	4/5	6/4
2½ in.	8/7½	4/11	8/6
3 in.	9/8½	6/2	9/2
3½ in.	11/0½	7/3	11/–
4 in.	12/9	8/9	13/1

L.C.C. Coated Soil Pipes

2 in.	9/8½	7/7	9/2
2½ in.	10/4	8/5	11/5
3 in.	11/7	9/2	13/7
3½ in.	12/11½	11/5	15/10
4 in.	14/9	12/9	18/8

Above prices for gutters, rain-water and soil pipes for under 5-cwt. lots only. Lots over 5 cwt. see List No. 3300, dated February 1, 1955, plus 27½% and tonnage allowance. 4-ton lots 5%, 2-ton lots 2½%.

L.C.C. Coated Drain Pipes

	£ s. d.
4 in. diameter in 9 ft. lengths ... ... per yd. run	1 11 1
6 in. do. do. ... ... ,,	2 5 6
4 in. diameter bends ... ... each	19 9
6 in. do. do. ... ... ,,	2 12 8
4 in. diameter branches ... ... ,,	1 15 1
6 in. do. do. ... ... ,,	4 4 2

above prices for any quantity but under 5 cwt. carriage extra.

Pitch Fibre Drain Pipes

	£ s. d.
2 in. diameter in 5 ft., 5 ft. 6 in. or 8 ft. lengths including couplings ... ... per ft. run	1 6½
3 in. do. ... ... ,,	1 10½
4 in. do. ... ... ,,	2 6
5 in. do. ... ... ,,	4 1½
6 in. do. ... ... ,,	5 0½
4 in. diameter short radius ¼ bends ... ... each	17 9
4 in. do. do. ½ bends ... ... ,,	12 11
2 in. diameter 6 ft. radius bends (5 ft. lengths) ,,	16 2
3 in. do. do. do. ,,	19 8
4 in. do. do. do. ,,	1 7 4
5 in. do. do. do. ,,	2 4 0
6 in. do. do. do. ,,	2 14 6

Above prices for loads of £60 and over.
Loads £25 to £59 19s. 11d. Plus 10%
Loads under £25 ... Plus 15%

Asbestos Rain-Water Pipes and Fittings

All less 17½% discount.	2 in.	2½ in.	3 in.	4 in.
Pipes, 6 ft. lengths ... ... per yd.	4/7	4/10½	5/11	7/10
Shoes ... ... each	3/–	3/3	3/10	5/2
Single Branches ... ... ,,	4/8	5/6	6/7	9/2
Bends, square or obtuse ... ,,	3/3	3/7	4/8	6/7
Swan Necks, 4½ in. proj. ... ,,	3/7	4/8	5/2	7/3
do. 6 in. do. ... ,,	3/10	5/2	5/10	7/10

Asbestos O.G. Gutters and Fittings

	4 in.	4½ in.	5 in.	6 in.
Gutters, 6 ft. lengths ... per yd.	4/4	4/9½	5/9	6/10½
Drop ends ... ... each	3/6	4/–	4/9	5/5
Stop ends ... ... ,,	1/1	1/2	1/3	1/5
Angles ... ... ,,	3/7	4/1	5/–	5/10
Nozzles ... ... ,,	3/6	4/–	4/9	5/–
Union Clips ... ... ,,	1/9	2/1	2/6	2/11

Asbestos Half-Round Gutters and Fittings

	per	3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters, 6 ft. lengths	yd.	3/0½	3/7½	3/8½	4/4½	6/1
Drop ends	each	2/6	3/–	3/3	3/7	5/2
Stop ends	,,	1/–	1/1	1/2	1/3	1/5
Angles	,,	2/10	3/3	3/7	3/10	5/2
Nozzles	,,	2/6	3/–	3/3	3/7	5/2
Union Clips	,,	1/3	1/4	1/5	1/7	2/5

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	52 17 6
Mild Steel Bars	47 8 6
Mild Steel Hoops	49 0 0

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft Sheets C.R. and C.A.—	
20 gauge	62 7 6
24 gauge	64 17 6
26 gauge	67 17 6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	70 18 0
24 gauge	74 8 0
26 gauge	79 13 0
Galvanised Flat Sheets C.R. and C.A.—	
20 gauge	72 8 0
24 gauge	75 18 0
26 gauge	81 3 0

ALUMINIUM AND ALUMINIUM ALLOYS

(Base Prices)		£ s. d.
Sheet BS 1740 S1C 18 SWG (36 in. wide)	per lb.	3 0
Sheet BS 1470 NS3 Utility 18 SWG (36 in. wide)	,,	2 11
Coiled strip BS 1470 S1C 18 SWG (24 in. wide)	,,	2 11
Coiled strip BS 1470 NS3 Utility 18 SWG (24 in. wide)	,,	2 10½
Coiled strip for flashing, high purity, 22 SWG (12 in. wide)	,,	3 1½
Corrugated sheet BS 1470 NS3 Circular Profile 8 ft. × 32 in. × 20 SWG	per sheet	1 13 6
Corrugated sheet BS 1470 NS3 Industrial Profile 8 ft. × 31¼ in. × 20 SWG	,,	1 19 3
Corrugated sheet BS 1470 NS3 Mansard Profile 8 ft. × 31¼ in. × 20 SWG	,,	1 12 7
Extruded section BS 1476 E1C simple moulding	per lb.	2 10
Extruded section BS 1476 E1C 1 in. diam. round	,,	2 7½
Extruded section BS 1476 HE10WP simple angle	,,	3 1½
Extruded section BS 1476 HE10WP 1 in. diam. round	,,	3 0½
Tubing BS 1471 T1C 1½ in. O/D × 20 SWG ...	,,	6 6½
Tubing BS 1471 HT19WP 1½ in. O/D × 20 SWG	,,	4 0½

PLUMBERS' BRASS WORK, etc.

Delivered in London area. B.S.S.

All per dozen	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron	87/–	128/–	—	—	—	—
Toilet bib cocks for iron ...	109/–	158/5	—	—	—	—

PLUMBERS' BRASS WORK, etc.—*continued*

All per dozen	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown stop cocks for iron	66/–	95/9	188/–	363/–	522/6	917/6
do. with two unions for lead	89/–	132/–	234/4	472/–	623/6	1,389/6
Double nut boiler screws ...	18/8	26/5	47/6	48/6	67/–	93/6
Heavy Croydon ball valves ...	77/–	193/6	312/5	568/8	734/10	—
Plumbers' union brass lead to iron	19/6	23/6	38/6	52/10	70/6	165/–
	1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and Screws	33/–	40/8	59/6	92/5	118/10	155/3
Brass Sleeves	—	31/11	31/11	56/2	74/10	91/5
	1½×6 lb.	1½×6 lb.		2×7 lb.	3×7 lb.	
Lead P. trap with brass cleaning screws	68/6	85/6		137/–	233/9	
Lead S. trap do. do.	82/9	102/9		168/3	302/3	

Solder :			s.	d.
Plumbers' ...	1 cwt. lots	320/–	3	7
Tinmen's	,, ,,	404/–	4	5
Blow pipe ...	,, ,,	407/–	4	6

Copper Tubes and Sheets

Copper tubes BSS 659/1944 on the basic price of 25½d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 10 cwt.

	Extra d.	Total per lb. d.	Approx. per ft. d.
½ in.×19 gauge	15½	40½	11
¾ in.×19 ,,	13¾	39¼	15¼
1 in.×18 ,,	12¼	37⅝	23½
1¼ in.×18 ,,	11⅝	37	28
1½ in.×18 ,,	11⅝	37	33¾
2 in.×17 ,,	13¼	38⅝	54

Small Quantity extras :

10 cwts. to 5 cwts.	plus ½d.	per lb.
5 cwts. to 2 cwts.	,, 1d.	,,
2 cwts. to 1 cwt.	,, 2d.	,,

	£	s.	d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras	251	0	0

Zinc

		£	s.	d.
Sheet Zinc, 10 gauge (25 SWG), 5 cwt. lots upwards	per cwt.	7	15	3
,, ,, 12 gauge (23 SWG), ,, ,, ,,	,,	7	14	9
,, ,, 14 gauge (21 SWG), ,, ,, ,,	,,	7	13	6

Brass Tube

Brass tubes, basic price, plus gauge and manufacturing extras	per lb.		1	9

LEAD SHEET AND PIPES

Basis selling price to one address in London or Home Counties :

		£	s.	d.
Lead Sheet, English, 3½ lb. substance and upwards	per ton	101	15	0
,, Water Pipe, in coils	,,	104	0	0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. in dia.	,,	105	10	0
,, ,, ,, over 4 in. dia.	,,	107	10	0
,, Gas or Untinned Compo pipe...	,,	105	10	0
5 cwt. lots and over less 6d. per cwt. off basic prices.				
Extras over Basis for quantities under 5 cwt. :				
3 cwt. and under 5 cwt.	per cwt.		4	0
1 cwt. do. 3 cwt.	,,		6	0
Smaller quantities than 1 cwt. priced specially.				
Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.				
Allowance for Old Lead, collected, £56 0s. 0d. per ton weighed at buyer's works.				

PLASTER, etc.

		£	s.	d.
Coarse Pink in 1-ton loads and over delivered on site	per ton	8	8	3
do. White do. do. do.	,,	8	17	9
Sirapite Coarse BSS 1191 Class C do.	,,	8	19	9
do. Fine do. do. do.	,,	9	7	6
do. Browning BSS 1191 Class B do.	,,	8	19	9
do. Board Finish do. do.	,,	8	19	9
Blue Lias Lime, in 6-ton loads	,,	6	14	6
Hydrated Lime (Grey) in 6-ton loads	,,	5	10	0
do. (White) do.	,,	6	0	0
Lump Lime (Grey) do.	,,	5	7	0
do. (White) do.	,,	5	14	6
White Keen's or Parian Cement, in 1-ton loads ...	,,	12	4	9
Pink Keen's or Parian Cement, in 1-ton loads ...	,,	11	19	6
Granite Chips, in 6-ton loads	,,	2	5	3
Hair	per cwt.	4	17	6
Gypsum Plaster Lath or Base Board, ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	per yd.	2	2½	
1,200 yds.	,,	2	1½	
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	,,	2	8	
1,200 yds.	,,	2	7	
Gypsum Plaster Wall Boards, 3 and 4 ft. wide 6 to 12 ft., ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	,,	2	5½	
1,200 yds.	,,	2	4½	
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	,,	2	11	
1,200 yds.	,,	2	10	

PAINTS AND DISTEMPER

Delivered London area.		£	s.	d.
Ceiling Distemper	per cwt.	1	7	6
Washable Distemper	,,	5	15	0
Gloss Paint	per gal.	2	16	0
Super Snowcem cement paint (in 1 cwt. drums) ...	per cwt.	4	0	0

Lead Products and Oils

		£	s.	d.
Ground White Lead, in 1 cwt. kegs	per cwt.	8	7	6
Genuine White Lead Paint, 1-19 gal. lots in 1 gal. tins	per gal.	3	6	6
Genuine Red Lead, Dry, 1 cwt. keg (10 ton lots)	per cwt.	5	12	6
do. do. do. (1 cwt. lots)	,,	6	19	0
Genuine Linseed Oil Putty, 1 cwt. keg	,,	2	13	6
Size XD quality 28 lb.	per tin		9	0
Raw Linseed Oil (5 gal.) drums extra	per gal.		19	2
Boiled Linseed Oil (5 gal.) do.	,,	1	0	0

Sundries

Turpentine substitute (5 gal.) drums extra ...	,,	5	4½
do. do. (40 gal.) do.	,,	4	8½
Solignum, Brown (5 gal. cans) Exterior	,,	8	8
Creosote (40 gal. barrels)	,,	2	3
Paste Powder (1 lb. packets)	per lb.	2	4
White Lining Paper	per piece	1	2

VARNISHES, etc.

Delivered London area.		£	s,	d.
Oak Varnish, Outside or Inside	per gal.	2	0	0
Oak, Pale Copal do. do.	,,	2	0	0
Hard Drying Oak for Inside	,,	2	5	0
Crystal Paper Varnish do.	,,	2	8	0
Eggshell Flat Varnish do.	,,	2	2	0
Finest Carriage Varnish	,,	2	7	0
Front Door Varnish	,,	2	4	0
Japan Gold Size	,,	1	12	0
Black Japan	,,	1	16	0
Brunswick Black	,,	1	12	0
Berlin Black	,,	1	10	0
Terebene	,,	1	12	0
Knotting (1 gal. bottles free)	,,	1	15	0
French and Brush Polish (do.)...	,,	1	15	0

GLASS

Delivered London area.		s.	d.
18 oz. Sheet Glass Ordinary Glazing Quality—			
Cut Sizes...	per ft. sup.		10
24 oz. do. do. do. do.	,,	1	0⅛
26 oz. do. do. do. do.	,,	1	3
32 oz. do. do. do. dol	,,	1	7½
⅛ in. Rolled Plate...	,,	1	3⅜
3/16 in. Rolled and Rough Cast...	,,	1	6½
¼ in. do. do.	,,	1	7½
¼ in. Figured Rolled and Cathedral, Standard patterns—			
White Group 1	,,	1	3⅜
do. Group 2	,,	1	9¾
do. Standard Tints	,,	2	1½
do. Special Tints	,,	7	3
⅛ in. Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating Group 3	,,	1	8½
¼ in. Wired Cast	,,	1	10½
¼ in. Georgian Wired Cast	,,	1	11
Hollow Glass Blocks—			
P.B.2 Cross reeded 5¾×5¾×3⅞ in.	each	3	9
P.B.3 Broad reeded 7¾×7¾×3⅞ in.	,,	5	9
P.B.32 Cross reeded 7¾×7¾×3⅞ in.	,,	5	9
P.B.4 Prismatic 7¾×7¾×3⅞ in.	,,	6	6
P.B.5 Flemish 7¾×7¾×3⅞ in.	,,	5	9
P.B.6 Boomerang 7¾×7¾×3⅞ in.	,,	6	6
Half Size Blocks—			
P.B.32 Cross reeded 7¾×3¾×3⅞ in.	,,	4	10
Radiused Corner Blocks to match up with—			
P.B.2 Cross reeded	,,	8	1
P.B.3 Broad reeded	,,	9	8
P.B.32 Cross reeded	,,	9	8
P.B.2, P.B.3, P.B.32 are also supplied in Light Diffusing Blocks at same price.			
¼ in. Polished Plate Glass, G.G. quality—			
In plates not exceeding 2 ft. sup.	per ft. sup.	4	7
,, ,, ,, 5 ft. sup.	,,	5	7
,, ,, ,, 45 ft. sup.	,,	7	6
,, ,, ,, 100 ft. sup.	,,	7	6
¼ in. Polished Plate, extra sizes, *i.e.*, plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways. G.G. quality—Not exceeding 135 ft. sup. or 240 in. one way or 130 in. both ways ...	,,	11	4
Not exceeding 180 ft. sup. or do.	,,	15	0
Plates exceeding 180 ft. sup. prices on application.			
Substances other than ¼ in. Polished Plate at Special Prices.			

Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass—	Minimum quantity	per ft. sup. s.	d.
18 oz. sheet O.Q.	3,000		7⅛
24 oz. ,, ,, ...	2,000		9½
26 oz. ,, ,, ...	2,000		11⅝
32 oz. ,, ,, ...	2,000	1	3½
⅛ in. Rolled Plate...	1,000		10⅞
¼ in. Figured Rolled and Cathedral Standard Patterns, White Group 1	1,000		10⅞
do. Group 2	1,000	1	2⅜
⅛ in. Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte Group 3	1,000	1	2⅜
3/16 in. Rolled Plate or Rough Cast	2,000	1	2
¼ in. do. do.	2,000	1	2½
¼ in. Wired Cast, Hexagonal	2,000	1	5
¼ in. Georgian Wired Cast	2,000	1	5¼

THE BUILDER RATES OF WAGES

AS FROM OCTOBER 3rd., 1960. (Every endeavour is made to ensure accuracy but we cannot be responsible for errors)

1. Craftsmen and Labourers.

Region	Craftsmen	Labourers
	s. d.	s. d.
England & Wales (Grade A) ...	4 11½	4 4
London	5 1	4 5½
Liverpool and District ...	5 1	4 5½
Scotland... ...	4 11½	4 4

2. Apprentices.

Age	Per cent. of Craft Rate	London and Liverpool Dist.	England, Wales
		s. d.	s. d.
15	25	1 3½	1 3
16	33½	1 8½	1 8
17	50	2 6½	2 5½
18	62½	3 2½	3 1½
19	75	3 9½	3 8½
20	87½	4 5½	4 4½

3. Young Male Labourers.

Age	Per cent. of Craft Rate	London and Liverpool Dist.	England, Wales and Scotland
		s. d.	s. d.
15	33½	1 6	1 5½
16	45	2 0½	1 11½
17	66⅔	2 11½	2 10½
18	100	4 5½	4 4

NORTHERN IRELAND is not included; rates fluctuate so much from district to district that reference should be made to local offices.
WATCHMEN.—The rates per shift for watchmen engaged on building sites is 27s. 3d. in London and Liverpool District, and 26s. in the provinces.
FEMALE OPERATIVES.—In all districts throughout the country except in Scotland the rate of wages for women, aged 19 and over, engaged in craft processes is 4s. 1d. per hour. Women engaged on work other than craft processes, 3s. 9d. per hour. In Scotland the rate for the woman craftsman is 4s. 4d. after a probationary period, and the woman labourer, 3s. 10d.

Comparative Prices of Materials

Description as Shown in Current Prices of Materials Pages

(Copyright '*The Builder*')

		January, 1939	*January*, 1960	*January*, 1961	*Percentage fluctuation on* 1960	*Percentage increase over* 1939
BRICKS :—		£ s. d.	£ s. d.	£ s. d.		
Flettons	per 1,000	2 6 3	5 18 0	6 12 0	+12	185
Blue Wirecuts	per 1,000	7 4 0	26 19 0	29 9 6	+ 9¼	309
Glazed	per 1,000	24 0 0	84 16 0	89 12 0	+ 5¾	273⅓
PIT SAND	per yd. cu.	7 9	1 3 8	1 3 8	—	205
¾ in. SHINGLE	per yd. cu.	7 3	1 4 3	1 4 3	—	233
¾ in. BROKEN BRICK	per yd. cu.	11 3	1 0 9	1 0 9	—	85
PORTLAND CEMENT	per ton	2 2 0	5 12 0	5 12 0	—	168
PORTLAND STONE	per ft. cu.	4 5	9 2	9 10	+ 7½	125
SLATES :—						
24 in. by 12 in.	per 1,000	31 5 0	150 19 7	155 10 0	+ 3	398
20 in. by 10 in.	per 1,000	20 15 0	99 11 6	102 0 0	+ 2½	391¾
16 in. by 10 in.	per 1,000	14 7 6	54 8 10	54 8 10	—	279
TILES :—						
Machine made (Staffs.) ...	per 1,000	4 2 6	15 2 6	16 1 6	+ 6¼	290
Hand made (Berks.) ...	per 1,000	4 17 6	15 15 0	16 10 9	+ 5	239¼
SOFTWOOD :—						
Carcassing quality	per standard	£18—£22	£92—£95	£94—£98	+ 2½	380
Joinery quality	per standard	£28—£35	£110—£135	£115—£140	+ 4½	305
HARDWOOD :—						
European Oak	per ft. cu.	14 0	2 10 0	2 10 0	—	257
English Oak	per ft. cu.	10 0	2 0 0	2 0 0	—	300
Honduras Mahogany ...	per ft. cu.	15 0	3 5 0	3 5 0	—	333
African Mahogany	per ft. cu.	12 6	1 10 0	1 10 0	—	140
Moulmein Teak	per ft. cu.	15 0	3 17 6	3 17 6	—	416
R.S. JOISTS, FABRICATED ...	per ton	16 10 0	65 15 0	67 19 9	+ 3⅕	312
⅝ in. MILD STEEL RODS ...	per ton	15 0 0	51 0 0	51 0 0	—	240
1 in. GALVANISED BARREL 'C'	per ft. run	5¾	1 3¼	1 3½	+ 1⅛	170
SHEET LEAD	per ton	23 0 0	112 15 0	101 15 0	− 9¾	342½
LINSEED OIL	per gall.	2 11	19 2	19 2	—	557½
GROUND ENGLISH WHITE LEAD	per cwt.	2 10 0	8 15 0	8 7 6	− 4¼	235
WHITE LEAD PAINT	per gall.	16 8	3 6 6	3 6 6	—	300
RED LEAD	per cwt.	1 18 0	5 12 6	5 12 6	—	196

TECHNICAL REVIEW

This Review of plant, equipment and materials—in most cases new or with new features—is intended to give brief details only of the products mentioned. Notices are based on data supplied by the manufacturers. Additional information and prices can be obtained either direct or by using the prepaid Readers' Service form which appears on page 174 of this issue. The form can be used for more than one inquiry.

1. Cleaning

A cleaning and DEGREASING GUN originating in Canada is now being marketed in this country. This simple device utilises the waste gases from a tractor, or any 2½ litres engine, and with the aid of a suitable cleaning compound mixed with water develops a high pressure cleaning vapour which will remove grease or mud. Pressure at the nozzle end is in the region of 150 lbs. to 200 lbs. per sq. in. depending upon the engine being used.

The apparatus has a 14 ft. stainless steel flexible hose, universal exhaust cone attachment and chromium plated tubing for rust protection. Besides cleaning, the gun can also be used for spraying creosote, whitewash and insecticide, as well as burning brush, weeds and oil from factory floors, when the flame attachment is fitted.

Opancol Ltd.,
20-21 Tooks Court, Cursitor-street, EC4.

2. Drying Out

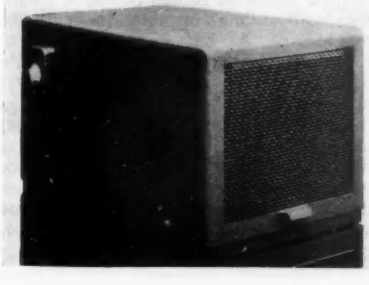
With so many new buildings going up, the latest development in the compressor type technique of dehumidification is of considerable interest. A range of PORTABLE UNITS, known as 'Hygro-Robots' can now reduce humidity down to 30 per cent RH and they can operate in ambient temperatures of from 104°F. down to 14°F. This should not only enable the drying out of new constructions to be speeded up but also ensure it can be done efficiently.

Whereas, until recently, the method of rapid drying out was to use excessive heat, the working system of the new units is based on the cooling technique. The damp air is drawn into the unit by a fan, cooled down below dew point, when the water vapour is condensed, and warmed back to room temperature before being exhaled. The water withdrawn, which over 24 hours will vary between 7 and 17 gallons according to the model used, is discharged either into a bucket or direct into the main drainage system. The hermetically sealed, high performance, oil cooled compressors with which the machines are equipped have no external loose parts and require no maintenance.

When the unit is pre-set for automatic control it will work round the clock without supervision. In addition, the running cost is negligible as the current consumption is only 680 watts.

British Sarozal Ltd.,
22 Berners-street, London, W.1.

External and internal views of the portable 'Hygro-Robots,' which show a considerable advance in the technique of rapid drying out and protection against dampness. They are effective for volumes up to 100,000 cu. ft. and are particularly suitable for use in new buildings before plastering, decorating and floor laying



3. Stairways

A new range of STAIR TREAD COUPLERS have been specially designed to facilitate the erection of permanent and temporary stairways and to provide for the modern scaffolding technique of building the stairway into the scaffold. Both fixed angle and adjustable angle couplers are provided in the new range, the fixed angle giving a stringer angle of 38° for normal stairway requirements, the adjustable angle, a range of adjustment from 30° to 90° to overcome the problem of erecting a stairway in a restricted area. Both models are supplied left and right handed and are marked accordingly for quick identification.

Scaffolding (Great Britain) Ltd.,
Mitcham, Surrey.

4. Plastics

The use of plastic sheeting to protect building sites during bad weather is becoming more frequent and we learn of another method currently being employed at Hampton House, Middlesex. This time a covering of PROTECTIVE PANELS, 6 ft. square, is used each made up of two cedar-wood frames which are clamped together, sandwiching between them a single web of BCL polythene film (500 gauge). The film is further supported by thin wooden slats interwoven by a patented method.

Permafence panelling in use at Hampton House, Middlesex. In this instance, only the windward sides are protected and the roof is covered with BCL polythene film

The panelling is supported by steel scaffolding put around the foundations before building begins. The panels are fixed to lines of wooden battens running round the scaffolding six feet above each other. At Hampton House, wire is used to secure the panels to the battens and to each other. This system has been proved satisfactory but alternative methods are being devised. The panelling is designed for use with all makes of scaffolding, but in this instance Sterling-Safway provided the framework.

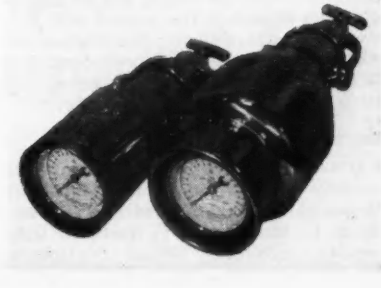
Permafence Ltd.,
Taplow, Bucks.

5. Moisture Control

A MOISTURE TESTER, which is simple and reliable in use, has been designed specifically for routine checks on moisture control in the building industry. The method employed with this instrument is based on the principle of reaction between calcium carbide and water. Specially prepared carbide is supplied with the tester and when in contact with materials containing moisture, acetylene gas is instantly generated. The pressure of this gas within the sealed container is indicated on a pressure gauge calibrated to show the percentage of moisture.

Thomas Ashworth & Co. Ltd.,
Sycamore-avenue, Burnley, Lancs.

Tests with the 'Speedy' moisture tester can be carried out in 3 to 5 minutes



News In Brief

Ordnance Survey Maps

INCREASED PRICES for ordnance survey maps and plans have been announced to take effect from January 1. Lists of revised prices may be obtained on request from the Ordnance Survey, at Chessington, Surrey, or from the principal agents, Edward Stanford Ltd., of 12-14 Long Acre, London, WC2.

Competition on Technical Literature

ARCHITECTS frequently comment on the need for improved technical literature. A competition with the object of giving them an opportunity to consider and express their ideas on the aim, content and use of manufacturers' catalogues and leaflets, and so help manufacturers to produce improved technical literature, is to be held by Barbour Index Ltd.

The competition is open 'to all architects and architectural assistants working or registered in the United Kingdom.' A total of 500 gns. in prize money will be awarded as follows: First prize, 250 gns.; second, 100 gns.; third, 50 gns.; and four prizes of 25 gns. The competition will be judged by Messrs. D. E. E. Gibson, CBE, FRIBA (Director General of Works, War Office); Howard V. Lobb, CBE, FRIBA; Dargan Bullivant. ARIBA; P. Talbot-Smith (director, UAM Group of Companies); and R. N. Smith (director, William Newman & Sons Ltd.). The closing date is April 28. Details from 'Competition,' Barbour Index Ltd., 81 Charlotte-street, London, W1.

West-street Development, Brighton

BRIGHTON TOWN COUNCIL decided on January 12 to accept the recommendation of Sir Hugh Casson, their consultant, and invite the Taylor Woodrow group of companies to submit a scheme for redevelopment of the West-street site of 11¼ acres on Brighton seafront. Speaking at the meeting Sir Hugh said that none of the three schemes was quite suitable, but he thought the Taylor Woodrow project (for which the architects are Messrs. Russell Diplock Associates, 235 Vauxhall Bridge-road, SW1) could best be amended to meet his recommendations for the area.

Walton Town Centre Development

PLANS for the redevelopment of Walton town centre have been approved by Walton and Weybridge Urban District Council. The proposal, which has yet to be agreed by the county planning authority, includes the erection of a 10-storey block of flats, a 6-storey building containing multiple shops, and an underground car park. The project will also involve the sale of Walton film studios and adjoining land. An offer of £¼m. has already been made for the adjoining land by a property development company.

Building Supervisors' Association

A BUILDING SUPERVISORS' ASSOCIATION has recently been formed for the South-East Metropolitan Region, under the presidency of Mr. Charles F. Scott, ARIBA, regional architect. Official recognition has been received from the Regional Hospital Board, and the association now has a full membership. The aims are to provide a more efficient building service in the region by the discussion of problems common to most hospitals, lectures and demonstrations by commercial firms. Plans are being made for the formation of a national executive to deal with the many problems facing building supervisors at a national level.

Direct Labour Contract

A CONTRACT valued at £3,123,937 has been awarded by Sheffield County Borough Council to its Direct Labour Department for the erection of 1,160 dwellings for stage two of the Park Hill redevelopment scheme.

The Late Mr. A. E. Janes

WE RECORD WITH REGRET the very sudden death on January 12 of Mr. Arthur E. Janes. Mr. Janes, who was 55, was north of the Thames Home Counties sales representative of Dimplex, Ltd.

Timber Preservation Appointment

MR. E. H. BROOKE BOULTON, president of the Institute of Wood Science, has merged his Pestcure company with Woodworm & Dry Rot Control Ltd., 16 Dover-street, W1. He has taken up a new appointment as timber consultant which, by relieving him of commercial and administrative responsibilities, will enable him to concentrate on the technical aspects of timber preservation. A reception was given at the House of Commons on December 21 when Mr. John Biggs-Davison, MP, was at home to Mr. Boulton and his guests.

Technical Films at Manchester

FORTHCOMING technical film shows organised by the Manchester Building Centre in conjunction with the Ministry of Works include: 'New Light in Industry' (January 23), 'The Titanium Pigment Story, and 'Parapet Walls' (February 6). 'The New "V" Brick' and 'Handling Bricks in Packages' (February 20), 'Give Us a Ring' and 'Soil Cement Roads' (March 6), and 'Fabrication of Laminated Plastics' (March 20). The films will be screened promptly at 1 p.m., admission free, at the Building Centre, 115 Portland-street, Manchester.

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Trade News

New Showroom

MOFFATS LTD., the makers of electric cookers, have recently opened their new showroom and head office at 35 Davies-street, London, W1. This is the first stage in their programme to expand the sale of cookers which are imported from Canada. They hope later to start assembly in this country and finally to undertake the whole of the manufacture here. At the showroom a wide range of cookers is being shown which include many new automatic features, such as a deep well cooker and fat fryer recessed in the hob, a self-basting rotisserie spit and thermostatically controlled hotplates. The largest model on view is a 40 in. double oven unit with two grills and five hotplates.

Foreman Painter's Award

MR. J. STACK, a foreman painter who, with forty others, competed for a silver trophy awarded by his employers, Decorative Painting Contractors Ltd., was presented with the trophy and a cheque for £50 on January 9. The presentation was made by Mr. A. G. Moore, the managing director, at the company's annual dinner.

Regent Street Exhibition

AN EXHIBITION of 'Vanitory' units is being held by Formica Ltd. in their showrooms at De La Rue House, 84-86 Regent-st., W1, from January 2, for several weeks. A representative selection of production-line models from leading manufacturers is on view, together with two which can easily be constructed by the home handyman.

After Flood Care of Houses

OUTLINE PRECAUTIONS were recommended by Dr. C. T. Kyte in 'The Builder' of November 25 to those unfortunate householders whose dwellings suffered from the recent floods. Dr. Kyte's recommendations related to the prevention of dry rot and entailed taking up floor boards. Arising from this it has been suggested that advantage should be taken of the opportunity to insulate the floor. One method would be to add reflective insulation with aluminium laminates marketed by Messrs. A. Latter & Co. Ltd., of Croydon. 'Lattenax' is a waterproof building membrane manufactured in accordance with BSS 1521: 1959. It may be obtained in various grades and may also be used for roof insulation. The distributors state that it has a good weight/strength ratio, perfect waterproofing, high wet bursting strength, good tensile strength and contains spun fibre reinforcement. It can be fixed quite easily and at relatively little cost.

CHEMICAL WORKS

AT NORTH LYNN, NORFOLK

FOR DOW AGROCHEMICALS LTD.

Illustrated in this issue

Architects:
Fry Drew & Partners.
Assistant Architect: Derek R. Preston, A.R.I.B.A.

GENERAL STRUCTURAL WORK BY

KYLE, STEWART [CONTRACTORS] LTD.

from **Client's flow-sheet**

and a green field...

to **FINISHED FACTORY**

in two months under schedule

CJB

CJB have quite a habit of finishing projects ahead of schedule, as in the case of the 3½ acre factory and office block for Dow Agrochemicals Ltd. at King's Lynn.

Starting with Dow Agrochemicals flow-sheet, CJB engineered, procured, constructed and commissioned the factory, together with its roads, sidings and water supply services, in two months under schedule.

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Staff Block.
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Executive Architect: William Knight.

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OVERSEAS BUILDING

From Our Own Correspondents

AUSTRALIA (SOUTH).—The Premier, Sir Thomas Playford, reached Sydney last week to seek the support of the New South Wales Government for the construction of a dam costing £A9m. on the River Murray. The South Australian Government has proposed that the dam should be built five miles inside the South Australian border, 49 miles from the junction of the Murray and Darling rivers. The dam would back up water as far as the lock across the Murray at Wentworth, New South Wales, providing large amounts of water for irrigation.

CANADA (ALBERTA).—$4m. will be spent this winter on construction work in national parks. $1m. of this will be spent on road construction at Jasper National Park.

CANADA (BRITISH COLUMBIA).—If the Federal Government purchases the International Airport from the City of Vancouver, $13m. to $18m. will be spent on construction of new terminal buildings.

CANADA (BRITISH COLUMBIA).—Plans for construction of a $4m. factory for the Dominion Glass Co. Ltd. are nearing completion. The plant will be located at Burnaby and building is expected to start in April. Drawings are being prepared by Foundation of Canada Engineering Corporation Ltd.

DOMINICAN REPUBLIC. — The biggest single civil engineering project to be undertaken in the Dominican Republic, the Tavera Dam hydro-electric and irrigation project, will be started this month. At present those concerned in the scheme are the Public Works and Agriculture Department of the Government and the Dominican contractors, Bonnet and Armenteros. Announcing the commencement of work, which will cost a total of $33,758,000, the Governor of Santiago Province stated that there will be three stages. First the dam will be built at a cost of $16,758,000; second, irrigation canals over an area of 60,000 acres ($5m.) will be built; and third, hydro-electric equipment will be installed ($12m.).

GHANA.—A new capital investment of about £180,000 is to be made in Ghana by the United Africa Company Ltd. A contract for three warehouses to be constructed at the port of Tema has been awarded to Taylor Woodrow (Ghana) Ltd. and work is scheduled to begin this month. The three warehouses will form a distributing centre for imported merchandise. They will each be 30 ft. high of reinforced concrete construction with blockwork walling, covered in aluminium and translucent roof sheeting to give additional light. The buildings will provide about 81,000 sq. ft. of usable floor area with extensive uninterrupted areas for working and storage. There will also be office accommodation, a welfare block with canteen and lavatories for the warehousemen, maintenance and refuelling services for plant and transport, loading platforms and site roads. Design of the buildings has been carried out by the architects' department of Taylor Woodrow (Overseas) Ltd.

ISRAEL.—A new 17-storey, 140-bedroom hotel is under construction on the Herzliya seafront. The hotel is being built by Israel-America Hotels Ltd. at a cost of I£4.5m. and is scheduled for completion early in 1962.

PAKISTAN.—Completion of negotiations for the construction of a new 300-room hotel in Karachi was jointly announced today by Air Commodore Nur Khan, managing director of Pakistan International Airlines and by Intercontinental Hotels Corporation, a wholly-owned subsidiary of Pan American World Airways Inc. The hotel will be designed under the supervision of Intercontinental Hotels. The hotel, which is estimated to cost approximately $7m., will be erected on a 12-acre site in the Clifton area of Karachi, overlooking the Arabian Sea. Groundbreaking is tentatively scheduled for August this year, and the hotel will be opened in 1963. In addition to this project it has been announced that an affiliate of PIA would be confirmed in association with IHC and other Pakistani investors to build major hotels in Rawalpindi (which is the site of the present capital), Lahore and other important cities of East and West Pakistan. Consultants have not yet been announced.

SINGAPORE.—Singapore Government is to build 10,000 flats, to cost (Malayan) $34m., in 1961 as part of its $230m. housing programme, to extend over five years. Mr. Tan Kia Gan, Minister of National Development, announcing this, said the 10,000 flats would be in three main development areas—Queenstown, Macpherson-road and the former Tiong Bahru cemetery. Mr. Lim Kim San is the housing and development board's chairman, and Mr. Alan Choe Fook Cheong the board's architect and town planner. The Government has called for tenders for the construction of a 10-storey primary school and assembly hall in Selegie-road. This is one of several to be built in 1961.

SOUTHERN RHODESIA. — The Meikles Organisation has instructed its architects to prepare plans for a £300,000 extension to its store at Bulawayo, to be built on two of the three stands occupied by the burnt-down part of their old premises.

SOUTHERN RHODESIA.—Richard Costain (Africa) Ltd., recently awarded a £187,000 contract for African housing by the Salisbury City Council, has also been awarded a housing contract valued at £380,000 by the Southern Rhodesian Government. Work will start within a month and includes the building of 800 houses and two schools in the Government township of Dangamvura at Umtali. The contract is of the package type and includes the design and construction of all services within the township, including roads, water and sewerage reticulation, and sewage disposal works.

UNION OF SOUTH AFRICA (THE TRANSVAAL).—A new shopping centre for Pretoria, costing £275,000, will be built in the suburb of Waterkloof early next year. Three department stores will open branches there. Flats will be erected above the shops. Building operations are expected to start in March and will be completed at the beginning of 1962.

UNION OF SOUTH AFRICA (CAPE PROVINCE).—The European Southern Observatory has chosen a site at Zeekoegat for its £1m. radial velocity-measuring station. Zeekoegat is 50 miles south of Beaufort West. Five European countries (West Germany, Belgium, France, Sweden and Holland) have agreed to assist in the building of the observatory, which will have the largest telescope in the southern hemisphere.

USA.—The largest mortgage financing transaction in America or this country on a single commercial property was announced on January 9 for the Pan Am Building in New York in which City Centre Properties Limited have 50 per cent interest. The cost is estimated at £35m. A group of New York Banking Institutions has agreed to provide a construction loan of some £23½m. and a permanent mortgage has been agreed with the largest pension fund in the State of New York up to £25m. The Pan Am Building will be, when completed, the world's largest office building and will contain approximately 3m. sq. ft. on the 3½ acre site adjoining Grand Central Terminal. The president of the company erecting the 59-storey skyscraper as an Anglo-American enterprise is Mr. Erwin S. Wolfson with Mr. Jack Cotton, chairman. The new building is being erected by the Diesel Construction Co. from plans by Emery Roth & Sons, architects, and Walter Gropius and Pietro Belluschi, consultant architects. It is scheduled for completion in December, 1962; demolition of existing buildings is almost completed.

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SCOTTISH BUILDER

Houses for Sale?

A PROPOSAL to offer new corporation houses for sale to existing tenants is likely to be considered shortly by the finance committee of Edinburgh Town Council.

Existing tenants and those about to take up a corporation tenancy would, it is proposed generally, be asked to deposit not less than £1 a week for home-purchase investment and would be allocated houses in a development planned for ultimate private ownership.

After 10 years the tenants would be expected to assume the same responsibilities of house purchase as those buying under mortgage with a corporation or a building society loan.

Planning Inquiry

THE SECRETARY OF STATE FOR SCOTLAND has appointed Mr. A. J. Mackenzie Stuart to hold a public local inquiry into the objections which have been lodged against the development plan for the County of Aberdeen (excluding Aberdeen suburban area and Deer district). The inquiry will be held in the County Buildings, Aberdeen, and will open on Monday, January 23.

Guidance for 'Thin Wall' Houses

THE Department of Health for Scotland in collaboration with the Building Research Station has prepared a new illustrated memorandum about the construction of houses with 'thin walls.' The new memorandum is meant to help local authorities, architects and the building trade generally and is obtainable from HM Stationery Office, price 3s. It takes account of the most up-to-date techniques which can be applied under codes of practice.

In a circular to local authorities about the new memorandum it is stated that cases where thin walls are not being properly built are not infrequently met so that delay and expense are incurred in putting them right. The memorandum particularly stresses the need for careful workmanship and for having plans checked by qualified structural engineers.

Appointment

MR. GILBERT LITTLE, water engineer for Dundee, has been recommended for the post of general manager of the Water Department of Glasgow Corporation to follow the retirement of Mr. Stanley Canvin, present head of the Department, in February.

New Buildings

AYRSHIRE.—Mr. W. T. H. Inglis, director of education in Ayrshire, has announced that the county is to spend £10m. on new schools, extensions and equipment up to March 31, 1964. A three-year programme of 43 buildings has been approved by the Education Com. at a cost of £5m. Two new technical colleges at Ayr and Kilmarnock will cost £800,000 each and work is now under way.

EDINBURGH.—Work has started on a new £130,000 development at Edinburgh Royal Infirmary where, it is expected, plans will soon be announced for the complete rebuilding of the hospital. The building will have a limited life. The Musselburgh firm of contractors have promised to complete the work in a year. . . . The Corporation is to proceed with a £1,300,000 project for the construction of a reservoir on the Fruid Water, an upper tributary of the Tweed, increasing the Corporation's resources from 38m. gallons a day to over 45m. gallons a day. Work should begin in 1962 taking four years for completion. The reservoirs, two miles long, will have a capacity of over 2,000m. gals. and will comprise a 75-ft. high earthen dam.

EDINBURGH CORPN.—Clermiston North neighbourhood centre—127 houses; 70-80 Canongate—four houses and hall; Clermiston South—227 houses. All trades. Applications to City Architect, City-chbrs., Edinburgh 1.

GALASHIELS. — Approval has been granted by TC for the construction of a new storage reservoir, filter plant and ancillary work at a cost of £400,000.

GLASGOW.—A terrace of ten small factories is being built for Vilmay Ltd., a Glasgow industrial development company, at Shuna-pl., Maryhill, Glasgow. The first two units will be ready in April and so far four factories have been leased.

GLASGOW. — Corporation's Planning Committee has approved the following number of major projects for city departments and other concerns: The Ministry of Works has been granted approval for a major administrative building at Drakemire-drive, Glasgow, S5. . . . The Education Department is to build a prim. sch. at St. Bernadette's, 435 Bilsland-drive, Glasgow. . . . The Housing Department has received approval for erection of 24 three-apartment dwelling houses at Galloway-st./Cairn-st., and for 12 three-apartment houses at East Keppoch extension. . . . Glasgow Tobacco Warehouse Co., Ltd., are to extend their premises at 26/40 Brown-st., Glasgow, C2. . . . Robert Maclehose & Co., Ltd., have been given planning permission for a single-storey extension to their printing factory at Foulis-st./Caxton-st., Glasgow, W3. . . . Higgs Electrical Engineers, Ltd., of 9 Robertson-st., Glasgow, are planning to erect electrical engineering shops, showroom, offices and stores at 13/17 Kent-rd., Glasgow, C5, where existing property would be demolished.

GLASGOW.—An eight-storey block and shops, offices and commercial premises are planned at 110-114 Bath-st. Permission in principle has been granted by the Corporation Planning Committee to Mamssorg Trust Ltd., of London, to carry out the development.

GLASGOW CORPN.—St. Teresa's prim. sch., Possilpark. Several works contract, City A and Director of Planning, 20 Trongate, Glasgow, C1.

LANARK. — A £2m. classified road improvement scheme has been drawn up by Lanark County Council at the request of the Scottish Home Department. The three-year programme involves some 60 projects, five of them costing over £100,000 each. Owing to the British Railways' electrification programme, about 33 bridges will be raised and probably widened. Over the last three years less than £500,000 has been spent on road improvement in the county.

LANARK CC.—Demolition of buildings on site of new county buildings in Beckford-st., Hamilton. Applications to County Architect, 34 Albert-st., Motherwell.

LANARKSHIRE.—John Lawrence (Glasgow) Ltd. have been given planning permission for 132 houses at Wester-rd., North Mount Vernon, Lanarkshire. . . . Applications for a further 131 houses are to be submitted to the CC.

MOTHERWELL AND WISHAW BURGH. —Construction of a 2,500,000 gal. r.c. covered clear water reservoir at Legbrannock, Newarthill, Lanarkshire, including pipe laying, drainage, construction of extension to existing access road. Applications to F. A. Macdonald & Partners, 11 Woodside-ter., Glasgow, C3. Dep. £5.

PERTH & KINROSS.—Joint CC Planning Com. are to consider proposals for a motel, restaurant and car park at an eight-acre site at Fendatie Farm, Ballingry, on the south shore of Loch Leven.

ROSS & CROMARTY CC.—All trade or separate trades basis. (1) Munlochy—four 3-apartment and one 4-apartment houses; (2) Alness—four 2-apartment, ten 3-apartment and five 4-apartment houses; (3) Strathpeffer—eight 3-apartment and four 4-apartment houses. Applications to R. Armour & Partners, quantity surveyors, 375 Union-st., Aberdeen.

RUTHERGLEN BURGH.—Dean of Guild Court has approved plans for 92 maisonette terrace and cottage-type houses to be built at Fernhill and Blairbeth by the TC. Est. cost is £152,000.

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Personal Column

MR. D. K. FRASER, joint managing director of G. A. Harvey & Co. (London) Ltd., has been appointed managing director. MR. H. E. COOPER has relinquished his office of joint managing director but remains a director of the company.

MR. S. J. STANBROOK has been elected a director of Radiation Ltd.

MR. R. G. WILSON, AMIHVE, has been appointed manager of the heating division of Trianco Ltd., Imber Court, East Molesey. Mr. Wilson was previously with Radiation Ltd., where he was for some years technical sales manager of the central heating division.

J. Gliksten & Son Ltd., parent company of the Gliksten Group, have appointed MR. A. H. EVERITT to be a director of The National Plywood Corpn. Ltd., and MR. R. C. J. PASOLA and MR. A. BROWN to be directors of Gliksten Export Sales Ltd.

MR. D. H. GODDARD has been appointed lamp and lighting group representative (SE Region) of Philips Electrical Ltd. He replaces MR. N. A. RICHARDSON, who has been appointed manager of the domestic lighting fittings department at Philips' Brixton works.

THE BUILDER CONSTRUCTION NEWS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list, see previous issues. Those preceded by the symbol (A) are advertised in this number. The latest date for the receipt of tenders or applications appears above each paragraph. The symbol (R) preceding each entry indicates that applications must be received by this date.

BUILDING

JANUARY 23

(AR) EAST SUFFOLK JOINT STANDING COM.—Firm price tenders for one pair of police inspectors' houses, etc., at Normanston-Br., Lowestoft. County A. Tenders by Feb. 10.

JANUARY 24

(AR) BIRMINGHAM CITY C.—Erection of one, two and four-storey dwellings at Gibbins-rd., Selly Oak. City A. Dep. £2 2s. Tenders by Feb. 24.

JANUARY 25

(AR) GATESHEAD CBC.—Erection of three-form entry jun. sch. Boro' S.

JANUARY 26

(AR) SURREY CC.—General building work—mainly extensions and additions (14 contracts). County A.

JANUARY 27

(AR) HESTON & ISLEWORTH BC.—Erection of sports pavilion at Thornbury playing fields. Boro' S. Dep. £2 2s. Tenders by Feb. 27.

(AR) PETERBOROUGH JOINT EDUCATION BD.—Extension to Peterborough Technical College. Portess & Richardson, architects, Lloyds Bank Chambers, Peterborough. Dep. £3 3s.

JANUARY 28

(AR) BLACKBURN CBC.—(a) Proposed reconstruction of potting sheds at Witton Park. (b) Proposed convenience at Corporation Park. Boro' E. Dep. £2 2s. (each contract).

(AR) ESSEX CC.—Firm price tenders for school building work, etc. (nine contracts). County A.

(AR) SOUTHAMPTON CBC.—Erection of assembly hall, kitchen, etc., at St. Monica prim. sch. Boro' A. Tenders by Feb. 24.

JANUARY 30

(AR) BARKING CORPN.—Erection of 21 garages at Thames View estate. Boro' A.

(AR) CHESHAM UDC.—Erection of 12 flats at junction of Great Hivings and Mount Nugent, Chesham. E. S. North, architect, Norfolk House, Station-rd., Chesham, Bucks. Dep. £2 2s. Tenders by Feb. 21.

(AR) PEMBROKESHIRE CC.—Erection of new home for aged persons at Narberth. County A. Dep. £2 2s.

(AR) PORTSMOUTH CITY C.—Erection of 12 flats at Lake-rd. City A. Dep. £1.

JANUARY 31

(AR) SOUTHAMPTON CBC.—Erection of one four-storey block adjoining shops at Weston Farm estate. Boro' E.

FEBRUARY 1

DUBLIN.—Erection at Dublin Airport of an administration and staff catering building. Secretary, Department of Transport and Power, Room 304, Kildare-st., Dublin. Dep. £21.

(AR) DURHAM CC.—(a) Erection of Newton Aycliffe hostel for aged persons. (b) Erection of Stockton hostel for aged persons. County A.

(AR) HORNSEY BC.—Erection of changing room pavilion at Newland-rd. playing field. Boro' E&S. Tenders by March 6.

(AR) MAIDSTONE & DISTRICT CREMATORIUM JOINT COM.—(a) Erection of new crematorium and alterations to existing lodge building at Vintners Park. (b) Construction of new entrance and road works, etc., Clerk to Com.

FEBRUARY 3

(AR) KINGSTON-UPON-THAMES RBC.—Stage one of improvements to Norbiton estate. Boro' S.

(AR) MALDEN & COOMBE BC.—Erection of ten garages and two blocks of four garages at Sheephouse-way. Boro' E&S.

FEBRUARY 6

(AR) EAST SUFFOLK CC.—Firm price tenders for: (a) Extensions and alterations to Reydon mod. sch., and (b) new science block at Beccles grammar sch. County A. Tenders by March 9.

(AR) PEMBROKESHIRE CC.—Proposed new infants sch. at Prendergast, Haverfordwest. County A. Dep. £2 2s.

FEBRUARY 8

GLENDERRY (Co. Kerry).—Erection of a national sch. Secretary, Office of Public Works, 51 St. Stephens' Green, Dublin. Dep. £1.

FEBRUARY 9

(A) SOUTHEND-ON-SEA CBC.—(a) Additional locker accommodation to Belfairs golf course, and (b) toilet and shower accommodation at Belfairs sports ground pavilion. Boro' A.

FEBRUARY 10

(A) ABINGDON BC.—Construction of swimming pool, changing rooms, etc., at Abbey Meadow. Boro' E&S.

FEBRUARY 13

(AR) HAMPSHIRE CC.—Erection of new hostel block. etc., at Sparsholt Farm Institute, nr. Winchester. Louis de Soissons, Peacock, Hodges, Robertson and Fraser, architects, 12 Baring-cres., Exeter. Dep. £2 2s.

(A) NORTHFLEET UDC.—Erection of 26 flats at Burch-rd., Northfleet. E&S. Dep. £2 2s.

(A) RICKMANSWORTH UDC.—Firm price tenders for sports pavilion, shelters, etc., at Baldwins-la. recreation ground, Croxley Green. E&S. Dep. £2 2s.

FEBRUARY 14

(A) SWADLINCOTE UDC.—Fixed price tenders for 32 flats at Midland-rd. E&S. Dep. £2 2s.

FEBRUARY 15

(A) MIDDLESBROUGH CBC.—Alterations and additions to ambulance station at Ayresome Green-la. Boro' E&S. Dep. £2 2s.

(A) MORECAMBE & HEYSHAM BC.—Erection of eight flats at Branksome-drive estate. Boro' E&S. Dep. £2.

(A) RICKMANSWORTH UDC.—Firm price tenders for 44 garages at Maple Cross housing estate. E&S. Dep. £2 2s.

(A) ROWLEY REGIS BC.—Conversion and extension of present cemetery chapel, Powke-la., Blackheath, into crematorium. Harper & Sperring, architects, 179 High-st., Cradley Heath, Staffs. Dep. £5 5s.

(A) WEST HARTLEPOOL CBC.—Fixed price tenders for proposed additional accommodation at Brierton sec. mod. sch. for boys. Bell & Spouse, architects, 10 Scarborough-st., West Hartlepool.

FEBRUARY 16

(A) BARNES BC.—Firm price tenders for: (a) 12 flats and 12 garages at Chertsey Court, and (b) four garages at Lambert-ave. Boro' E&S.

FEBRUARY 17

(A) IRLAM UDC.—Erection of 32 bungalows and one communal building at New Moss-rd., Cadishead. Boro' E&S. Dep. £2 2s.

FEBRUARY 22

(A) STROOD RDC.—Erection of 18 flats and 24 garages at Swingate estate, Cliffe. E&S. Dep. £5 5s.

FEBRUARY 24

(A) FARNHAM UDC.—Fixed price tenders for one pair of three-bed. houses at Baldreys. Gilbert & Hobson, architects, 69a Castle-st., Farnham, Surrey. Dep. £2.

(A) SUNDERLAND CBC.—Firm price tenders for: (a) Erection of Town End jun. and infants' sch. (b) Erection of first phase of Hylton Red House comprehensive sch. Boro' A. Dep. £2 2s. (each contract).

MARCH 1

(A) LUTON BC.—Fixed price tenders for the erection of Limbury Meads CP infants' sch. Boro' A.

(A) STOURBRIDGE BC.—Erection of block of six shops with maisonettes over at Lye Cross. Boro' E&S. Dep. £3 3s.

(A) UXBRIDGE BC.—Erection of three blocks of one-bed. flats at Leybourne-rd., Hillingdon. Boro' S. Dep. £2 2s.

NO DATE

(A) CHESTER CITY C.—Proposed erection of Hoole sec. mod. sch. City E&S.

(A) WAKEFIELD CITY C.—Erection of jun. and adult training centre at Lawefield-la. City E.

(A) WARWICK BC.—Erection of 6 shops, offices and stores, etc., and 6 maisonettes and two flats over six garages at Percy estate, central area. Boro' E&S. Dep. £2 2s.

SERVICES, PAINTING, MATERIALS, ETC.

FEBRUARY 2

(A) COVENTRY CORPN.—Materials. City E.

FEBRUARY 3

STAFFORDSHIRE CC.—Materials, etc. County S.

FEBRUARY 7

(A) WIDNES BC.—Fixed price tenders for the erection of Westmorlond stone walling at crematorium. Boro' A.

FEBRUARY 11

(AR) MIDDLESBROUGH CBC.—Supply of building hardware. TC.

FEBRUARY 18

(AR) MERTHYR TYDFIL CBC.—Materials, etc. Boro' E&S.

MUNICIPAL AND CIVIL ENGINEERING WORKS, ETC.

JANUARY 23

(R) TENBURY RDC.—Fixed-price tenders for the construction of a 75,000-gal. reinforced concrete elevated water tower, complete with pipework and other ancillary work. John Dossor & Associates, constg. engrs., 54 Broad-st., Worcester. Dep. £5 5s. Tenders by Feb. 20.

FEBRUARY 6

NEWCASTLE-UNDER-LYME BC.—Surface dressing of approx. 100,000 sq. yd. of classified and unclassified roads in Borough. Boro' E&S.

YORK CITY C.—Construction of approx. 7,800 lin. yd. of 6 in., 4 in. and 3 in. dia. clayware land drains, manholes; cultivation and seeding of approx. 7¾ acres of playing field, and the construction of three hard tennis courts at Low Fields sec. mod. sch. playing fields. Chas. J. Minter, 7 St. Leonard's-pl., York. Dep. £2.

FEBRUARY 20

HIRAETHOG RDC.—Construction of about 20 miles of AC mains and fittings up

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to 6 in. dia., and a reinforced concrete service reservoir of 75,000 gal. capacity. Howard Humphreys & Sons, constg. engrs., West-st., Epsom, Surrey. Dep. £5 5s.

MARCH 3

SOUTH CAMBRIDGESHIRE RDC.—Sawston Sewerage and sewage scheme.—Fixed price tenders for about 9,000 yd. of 6 in., 7 in., 9 in., 12 in. and 15 in. glazed stoneware, concrete and spun-iron sewers, the construction of three pumping stations in reinforced concrete with brick superstructure; 2,300 yd. of 4 in., 7 in. and 12 in. spun-iron pumping mains, and a sewage disposal works. Lemon & Blizard, Ccl's constg. engrs., 59 Tufton-st., SW1. Dep. £10.

GENERAL BUILDING WORK (LONDON)

KINGSTON.—After a battle lasting more than a year with local residents, Wimpey's scheme to build three eight-storey blocks of luxury flats on sites of five houses in Albany Park-rd., Kingston, can now go ahead. The Minister of Housing has announced his approval of the plan.

(PROVINCIAL)

ANDOVER.—Work is expected to start shortly on erection of new fire station on site of present one. . . . BC's estimated capital expenditure for next financial year is £337,220. Of this, £145,000 is needed for London-rd. housing site; £35,000 for new reservoir; £2,100 for water main extension at Shepherd's Spring, £2,000 for new public conveniences; and £475 for library improvements.

ASHTON-IN-MAKERFIELD.—UDC propose erection of 110 dwellings at Low Bank-rd.

BANKS (Lancs).—West Lancs. RDC propose housing development.

BASINGSTOKE.—TC is seeking outline planning permission for siting of an indoor swimming pool with cafe and car park behind copse off St. Peter's-rd. Est. £115,000. . . . TC has approved office-block plan in connection with proposed new municipal buildings but is holding up remaining sections of design to see whether it is possible to combine council chamber, public hall and council suite.

BIRKENHEAD.—BC propose extensions and alterations to Park High sch. for boys.

BRACKNELL.—Bracknell New Town is to be extended from present population of 20,000 to ultimate figure of 54,000. MH&LG has prepared draft order concerning proposed addition of 1,230 acres of land on western, south-western and southern boundaries of present town.

CARLISLE.—Newcastle Regional Hospital Bd. propose erection of operating theatre suite at City Maternity Hospital. . . . F. W. Woolworth & Co. Ltd. propose shop conversion at English-st. . . . A. S. Nixon Ltd. propose erection of 10 pairs of sd houses at Green-la.

DEVIZES.—TC has approved scheme to build 110 one-bedroom flats and 60 'better-class' 3-bedroom houses at Carn Hill, Devizes. Est. £330,135. . . . TC is to ask CC to designate Borough as being suitable to take 'overspill' population of 3,000 to be housed at proposed new estates at Drake's Farm, Jump Farm and Quakers Walk.

DURHAM.—RDC has been authorised to obtain tenders for the proposed Bearpark sewerage and sewage scheme which is estimated to cost £46,000. . . . Sketch plans have been approved for a £320,000 grammar/technical sch. at Seaham for Durham CC. Architects are Newrick and Blackbell, 58 John-st., Sunderland.

HEALD GREEN.—Ches. CC propose erection of Welfare clinic/public hall branch library at junction of Finney-la. and Queenswav.

HEANOR.—UDC propose erection of old people's dwellings at Station-rd.

HEYWOOD.—BC propose erection of branch library on Manchester Corporation overspill housing estate.

HEXHAM.—Federated Properties Ltd., Fernwood-rd., Jesmond, Newcastle-on-Tyne, are seeking planning permission for the erection of shops at 7-11 Priestpopple, Hexham.

LEEDS.—TC propose erection of new remand home at Skelton-la., Whinmoor.

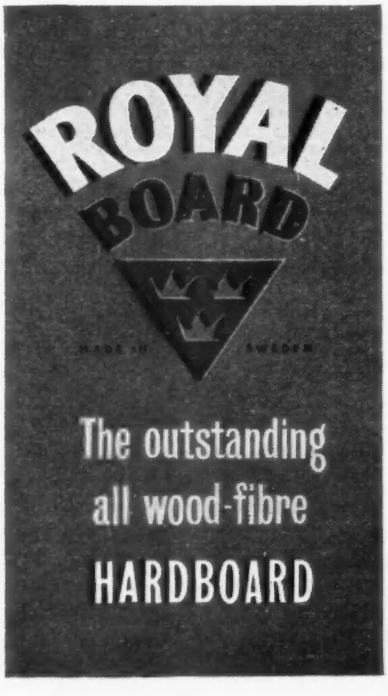
LIVERPOOL.—Following for TC: Eight dwellings at Beaufort-st.; ten shops with 20 flats over/52 garages at Gt. George-sq.; 15 dwellings/21 flats/five garages at Christopher-st./Ash-gr.; four two-storey dwellings at Warwick-st.; three dwellings/32 maisonettes/18 flats at Northfield-rd./Moss-la./Halstead-rd.; 12 flats at Grosvenor-ter./Belvidere-rd.; six flats/two garages at Portia-st./Stanley-rd.; 16 maisonettes at Grafton-st./Warwick-st./Upper Mann-st.; four flats at Berwick-st./Proctor-st.; 12 maisonettes/eight garages at Industrious-ter., Miles-st.; 24 maisonettes/36 flats at Reading-st.; 91 dwellings at Storrington-ave.; 33 flats/33maisonettes at Victoria-sq./Cazneau-st./Juvenal-st.; two multi-storey blocks, each containing 64 flats, at Menlove-ave./Vale-rd.; three multi-storey blocks each containing 64 flats/65 garages at Wellgreen-rd./Hartsbourne-ave.; 36 flats at Rankin-st./Mill-st.; 128 flats in two multi-storey blocks/182 maisonettes/69 flats/ten houses at Windsor-st./Berkley-st. . . . Following revised schemes for TC: 180 maisonettes (in four-storey blocks); 64 flats (in 11-storey block); six flats (in three-storey blocks) at Park-rd. and Mill-st. (Goring-st. area).

LIVERPOOL.—The Board of Governors propose extensions to St. Vincent's School for the Blind, West Derby.

LONGBENTON (Northumberland).—Plans have been approved for the erection of 18 houses at Elmcroft-rd., Forest Hall, for Graham & Son, bldrs., Haslam-hse., Westcroft-rd., Newcastle-on-Tyne.

Contracts Placed

We are glad to receive from architects and quantity surveyors for publication details of contracts placed to the value of £20,000 or over. Such information should reach the Editor as soon as possible after the contract is signed. Names of the architect and other consultants associated should be given.



MORECAMBE.—Shop and Store Developments Ltd., who recently purchased the site of the Gaumont Cinema, Morecambe, are to develop it by the erection of a block of super flats. It is hoped that building will start next year, with completion in 1963.

NEWCASTLE-ON-TYNE.—City Housing Com. has included in its annual estimates, the sum of £103,000 for construction of garages on Council estates.

NEWPORT.—Central & District Properties Ltd. have been successful in their tender for the leasehold of the Old Town Hall site at Newport, Mon. The accepted tender is based on plans prepared by Hector Hamilton Associates, London, architects. The proposed new building will consist of a five storey windowless department store with a floor area of 70,000 sq. ft. and surmounted by a fifteen-storey office building tower containing 60,000 sq. ft. The accepted tender, which was submitted on behalf of Central & District Properties Ltd., by Hillier, Parker, May & Rowden, is in the amount of £46,125 per annum for the first years of a 99-year lease. Construction of the new building will start soon.

NORTHUMBERLAND.—The County Welfare Com. is seeking permission to erect aged persons' homes at Ashington and Berwick, each providing for 60 beds and costing £65,000.

NOTTINGHAM.—A £27m. slum clearance scheme for Nottingham has been announced. It involves demolishing 9,000 houses in the city. About 20,000 people will be rehoused. . . . TC propose erection of new fire station at Bulwell. . . . EC propose extension to Teachers' Training College.

ROCHDALE.—Lancs. CC propose erection of adult training centre for mentally handicapped and sub-normal people during 1961-62.

ROTHERHAM.—RC Auth. propose erection of new prim. sch. at Canklow.

RUNCORN.—Broadbridge Bros., Moss Side, Manchester, propose erection of 40 sd houses and detached house at Woodall-drive.

ST. LEONARDS-ON-SEA (Sussex).—Hastings TC has given its approval in principle to the demolition of the derelict Eversfield Hotel on the seafront and its replacement by 85 flatlets for elderly people, with communal lounges, restaurant, etc.

SEDGELEY.—UDC propose erection of 242 dwellings at Garden Walk estate.

SOUTHSEA (Hants.).—With a change in ownership of the Queen's and Royal Beach hotels, modernisation of the former is planned by Southsea Hotels Ltd.

STOCKPORT. — Metrovincial Properties Ltd., a subsidiary of Mr. Charles Clore's City and Central Investments Ltd., have received planning permission for a shop redevelopment scheme in Princes-st./Woodman-st.

SUNDERLAND.—Plaza Cinemas Ltd., 69 Blackett-st., Newcastle-on-Tyne, are planning the conversion of the Roker Cinema, Roker-ave., Sunderland, into a petrol filling station and garage. . . . TC has received loan sanction for more than £1,000,000 for the erection of 702 houses on Town End Farm and Hylton Red House estates.

SWINTON & PENDLEBURY.—Lanes Construction Co. (Manchester) Ltd. propose housing development at Worsley-rd.

URMSTON.—Grange Garage (Urmston) Ltd. propose erection of petrol filling station on corner of Stretford-rd./Moss Vale-rd.

WALLSEND.—Bernard Thorpe & Ptnrs., estate agents, 30 Market-st., Newcastle-on-Tyne, acting on behalf of the Murrayfield Real Estate Co. Ltd., have submitted proposals to the local authority for the redevelopment of the central area of Wallsend, including the construction of shopping centres. The scheme has been approved in principle.

WESTMORLAND.—CC propose erection of comprehensive sch. at Calgarth. Est. £200,000.

WHITLEY BAY.—The Jewish community of Whitley Bay are seeking land for a new synagogue and social centre.

WILTON.—Work will start soon on the re-building of the North-st. site of Wilton Royal Carpet factory, severely damaged by gales in December. TC has approved plans.

TENDERS

(A) Denotes *accepted*.
(PA) Denotes *provisionally accepted*.
(RA) Denotes *recommended for acceptance*.
(AM) Denotes *accepted subject to modification*.
(GD) Denotes *accepted subject to approval by appropriate Government Department*.

BELFAST. — Erection of single-storey assembly hall and stores at Model sec. sch. for girls, Dunkeld Gardens, for CC. (A) William Grace & Co., 135 Tompkins-ave., Belfast.

BISHOP AUCKLAND.—Erection of 86 houses and nine old people's dwellings for UDC. (A) Edwin Pye & Son, East Parade, Bishop Auckland (in lieu of tender withdrawn).

BOURNEMOUTH.—Construction of new sewage disposal works at Holdenhurst for CBC. (A) Tarmac Civil Engineering Ltd., £300,000 (approx.).

BRACKNELL.—Stage I of new headquarters for MacFisheries Ltd. Architect is E. A. Ferriby, Bracnell Dev. Corpn. Quantity Surveyor is V. C. Douglas, Bracknell Dev. Corpn. (A) J. M. Jones & Sons Ltd., Maidenhead, £113,000.

BRIGHOUSE.—Fixed price tenders for old people's dwellings and roads, etc., at Laverlock-la. for BC. (A) Selleck Nicholls & Co., Ltd., St. Austell, Cornwall, £18,350.

CARLISLE.—Following for City C: Erection of garages at Chertsey Hill. (A) H. Cartner & Sons, £2,512. Road works at Chertsey Hill. (A) Border Engineering Contractors Ltd., £1,264. Roads and sewers at London-rd. (A) Border Engineering Contractors Ltd., £40,289. Improvements at Victoria-rd. (A) Direct labour, £2,001. Improvements at Kingstown-rd. junction. (A) Border Engineering Contractors Ltd., £5,032. Erection of 18 garages and formation of forecourts, etc., at Lightfoot-dr. (A) Direct labour, £3,240.

CARLISLE.—Construction of 56 miles of running lines and sidings at Carlisle marshalling yard. (A) Eagre Construction Ltd., £250,000.

CHATHAM.—(a) 12 flats and 10 houses, and (b) two houses at Ordinace-st. redevelopment area (stage 2) for BC. Boro' B&S is J. A. T. Richards. Quantities by Rider Hunt & Ptnrs. (A) Pyall & Jones, 66 Kingsway, Gillingham, £42,524.

CHELMSFORD.—Erection of 22 old folks' flats at Melbourne-ave. for BC. Stanley Bragg, High-st., Witham, Essex, architect. Quantities by E. Dudley Smith & Ptnrs., Chelmsford. (PA) L. V. Smith, builder & contractor, 'Fairview,' Kings-rd., Southampton, £34,124.

CHESSINGTON (Surrey).—Erection of second stage of new factory for Solartron Laboratory Instruments Ltd. Eric Firmin & Ptnrs., architects. (A) A. A. Stuart & Sons (Construction) Ltd.

CHESTERFIELD.—Erection of 44 dwellings at Boythorpe estate for BC. (A) A. Pearson & Co. Ltd., Sheffield.

CONSETT.—Construction of building to house oxygen steelmaking plant for the Consett Iron Co. Ltd. (A) Wright Anderson & Co. Ltd., Gateshead.

DERBY.—New factory at Ascot-dr. for The Midlands Co-operative Laundries Association. (A) Ford & Weston Ltd., Derby.

HAVANT & WATERLOO.—Erection of 68 dwellings at Cunningham-rd./Boyle-cres./Hamble-la./Annes-cres. (Waterlooville), for UDC. (A) Messrs. Faulkners, 113a London-rd., Waterlooville (fixed price tender).

LIVERPOOL.—Multi-storey block of 64 flats at Windsor-st. for TC. (A) Geo. Wimpey & Co. Ltd., London, £131,220. Erection of staff houses at Greaves Hall Hospital for Liverpool Regional Hospital Bd. (A) Sir Robt. Lloyd & Co. Ltd., Bromborough, Ches., £112,339.

LONDON CC.—Recent contracts placed by Council: Construction of structural floors, etc., at Ashmole-pl. site, Lambeth. (A) The Kleine Co. Ltd., St. Marylebone, £11,710. Provision of further teaching and administrative accommodation at Avery Hill Training College, Woolwich. (A) Galbraith Bros. Ltd., Kent, £268,322. Supply and fixing gas water heating in 503 dwellings at Becontree estate, Essex. (A) Wm. Edgar & Son Ltd., Middx., £22,879. Science improvements at Bloomfield county sec. sch., Woolwich. (A) J. A. Proctor Ltd., £10,438. Alterations and additions to Elmfield county sec. sch., Wandsworth. (A) C. Ash & Son Ltd., £16,000. Construction of one maisonette block and other work at Lewisham-way, Deptford. (A) T. R. Roberts (Builders) Ltd., £55,161. Major repairs, redecorations and minor improvements at Woodhill county prim. sch., Woolwich. (A) Hotson Bros. Ltd., Camberwell, £28,969. Alterations at Peckham Rye site, Camberwell. (A) Rowley Bros. Ltd., Tottenham, £425,515.

LONDON (City).—Erection of commercial building at 41-6 Featherstone-st., EC2, for Leigh Commercial Developments Ltd. A. G. Porri & Ptnrs., architects and surveyors. (A) Higgs & Hill Ltd., £138,000. Extension to 55-77 City-rd., EC1, for same development group. (A) Higgs & Hill Ltd., £300,000.

(GD) LONDON (Air Ministry).—Contracts to the value of £4,000 or over for week ended January 13: *Building work:* Gibraltar; Whatlings Ltd., 10 Woodside-cres., Glasgow, C3. Middleton St. George, Darlington, Co. Durham; F. Shepherd & Son Ltd., Blue Bridge-la., York. Coningsby, Lincoln; A. Monk & Co. Ltd., PO Box No. 4, Stamford, Lincs. Cranwell, Sleaford, Lincs.; William Wright & Son Ltd., Park-st., Lincoln. *Artificers' work:* Marham (Norfolk), etc.; Walter Lawrence & Son Ltd., Ventnor-hse., London-st., Swaffham, Norfolk. Wittering (Northants), etc.; Bettles Building Co. Ltd., 80 Alma-rd., Peterborough, Northants. Ballykelly, Limavady, Co. Londonderry, N. Ireland; J. Kennedy & Co. (Contractors) Ltd., Society-st., Coleraine, Northern Ireland. *Heating services:* Linton-on-Ouse, Yorks.; Richard Crittall & Co. Ltd., 151 Gt. Portland-st., London, W1.

(GD) LONDON (British Railways).—Recent contracts placed by Southern Region: *Padstow:* Strengthening of harbour wall; Aubrey Watson Ltd., Henley-on-Thames, Oxon. *Shoreham-by-Sea:* Cleaning and painting of viaduct; James Robb & Son Ltd., London, SE3. *Nine Elms:* New concrete roadway; E. C. MacDermot & Co., Wembley, Middlesex. *Cannon Street and River Bridge:* Dismantling and removal of timber staging; Caffin & Co. Ltd., London, WC2. *Extension of electrification at Ashford (K):* New tubular steel gantries; Smith & Jewel Ltd., Chichester, Sussex. *Sevenoaks:* Station renovations; P. & M. Contractors Ltd., London, SW1. *Wateringbury Station, Beltring and Branbridges Halt:* Renovations; P. & M. Contractors Ltd., London, SW1. *Extension of electrification, between Folkestone and Dover Marine:* New footbridge; R. Corben & Son Ltd., Dover, Kent. *Swanley:* New staff accommodation; Wm. F. Blay Ltd., Dartford, Kent.

(GD) LONDON (British Railways).—Recent contracts placed by North Eastern Region: Alterations to toilet accommodation at Middlesbrough Passenger Station; L. C. Abdale Ltd., Darlington. Roof drainage work at Shildon wagon works repair shops; Wright Anderson & Co. Ltd. The construction of three railway bridges over the River Calder and a bridge to carry Storrs Hill-rd. over Healey Mills new marshalling yard; The Mitchell Construction Co. Ltd., Peterborough. Extension of existing heating system at Walkergate carriage and wagon works; Arthur Heaton & Co. Ltd., Liversedge. The construction of a reinforced concrete bridge and associated earthworks for the new 'Up' Yard Hump at Newport marshalling yard; A. Robinson (Contractors) Ltd., Middlesbrough.

(GD) LONDON (Metropolitan Police).—Recent contract placed: Alterations and repairs, etc. at Hampstead Police Station, section house and married quarters; Messrs. Websters (Builders) Ltd., £5,293.

(GD) LONDON (MoW).—Contracts placed for week ended Jan. 7: *Buckinghamshire:* Alterations and additions to Post Office, Newport Pagnell; H. H. Woolnough & Son Ltd., 40 Harlestone-rd., Northampton. *Cheshire:* Erection of automatic telephone exchange, Birkenhead; Wm. Thornton & Sons Ltd., 38 Wellington-rd., Liverpool 8. *Denbighshire:* Erection of welfare and office block at PO sorting office, Wrexham; Alun Edwards Ltd., Cefn y Bedd, nr. Wrexham. *Durham:* Erection of Newtown PO, Manorway, Peterlee; Middleton & Co. (Sunderland) Ltd., Queen Alexandra-bdge.-approach, Sunderland. *Lincolnshire:* Erection of Crown Office buildings, Scunthorpe; Bernard Pumfrey Ltd., Wintern-wks., Lea-rd., Gainsborough. *London:* Electrical switch gear and cables at British Museum; Read & Ptnrs., 28-32 Hatfields, Stamford-st., SE1. *Northamptonshire:* Improvement scheme at Ministry of Pensions & National Insurance, 78 Westgate, Peterborough; Clifford Jellings Ltd., 90 Corden-st., Peterborough. *Yorkshire:* Alterations to Imphal barracks, York; Biscombe & Frith, Lawrence-st., York.

(GD) LONDON (War Dept.).—Contracts placed for week ended Jan. 6. *Dorset:* Painting and decorating at Bovington and Lulworth; P. J. Hartel (Southern) Ltd., Southampton. *Essex:* Miscellaneous at Colchester; C. H. Chaston Ltd., Clacton-on-Sea. *Hampshire:* Building at Aldershot; Davies & Rentowl (Aldershot) Ltd., St. Albans. Building at Aldershot; J. B. Edwards & Co. (Whyteleafe) Ltd., Kenley. Electrical installations at Aldershot; Liberty Electrical Co. Ltd., London, SW19. Miscellaneous at Farnborough; E. J. Logan (Putney) Ltd., London, SW15. *London:* Building at NW7; Frank R. Freeman Ltd., London, NW1. *Wiltshire:* Electrical at Salisbury Plain; South Wales Switchgear Ltd., Blackwood.

LONGBENTON. — Additions to Ethel Williams Hall to provide extra accommodation for students of Kings College. Architects are W. B. Edwards & Ptnrs., 5 Claremont-bldgs., Newcastle-on-Tyne. (A) J. R. Rutherford & Son, Jesmond, Newcastle-on-Tyne (work commenced).

LOWESTOFT.—New quay and factory at Lowestoft for Boulton & Paul Ltd. (A) J. L. Kiev & Co. Ltd., £920,000.

MACCLESFIELD. — New RC (special agreement) sec. sch. at Oxford-rd. for Ches. EC. (A) Cooper Bros. & John Clayton Ltd., Macclesfield, £119,400.

MANCHESTER.—Extensions to dormitory at Talmudical College, Crumpsall. (A)

The Paramount Construction Co. Ltd., Prestwich, Manchester.—Following for TC: Structural steelwork at Miles Platting sec. sch.

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(A) Sherratt & Smith Ltd.—Extensions to runway at Ringway Airport. (A) John Laing & Son Ltd., London.—229 dwellings and three communal laundries at Collyhurst. (A) Cubar Construction Co. Ltd., Manchester.—Site investigation survey for multi-storey development at Blackley New-rd./Charlestown-rd./Handforth, Ches. (A) Matthews & Mumby Ltd., Manchester.—767 dwellings and one family group home at Heywood. (A) Simms, Sons & Cooke Ltd., Nottingham.—349 dwellings and two family group homes at Councillor-la., Cheadle. (A) Roy & Ptnrs. Ltd., Salford.—73 dwellings at Glebelands-rd., Baguley, and 73 dwellings and tenants' meeting hall at Ossington-walk, Northern Moor. (A) H. Fairweather Ltd., London.—66 dwellings at Hazel-grove & Bramhall overspill site. (A) J. Foulkes & Sons Ltd., Stockport.—42 dwellings and one communal laundry at Butler-st., Miles Platting. (A) P. Bracegirdle Ltd., Irlam.

MIDDLESBROUGH. — Erection of 13 bungalows and 48 flats and 12 garages at Beechwood for TC. (A) Moore & Cartwright Ltd., High-st., Norton-on-Tees. Alterations to provide a department of physical medicine at Middlesbrough General Hospital for Newcastle Regional Hospital Bd., Benfield-rd., Newcastle-on-Tyne. Bd.'s Ch. A is P. H. Knighton. (A) John McCreton Ltd., 61 Kings-rd., North Ormesby, Middlesbrough, £60,909.

NEWCASTLE-ON-TYNE. — Construction of temporary workshops at College of Further Education for City C. City A is G. Kenyon. (A) R. Bowey & Son Ltd., William-st., South Gosforth, £19,987.

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OSWALDTWISTLE. — Erection of 68 dwellings at Knuzden for UDC. (A) Drury Estates Ltd., Leicester.

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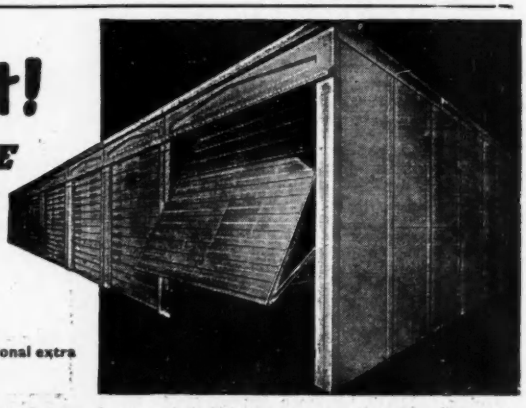

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